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ABSTRACT

Data were gathered relevant to two components, professional staff and students, to identify and assess effective and/or ineffective practices and procedures in the second phase of a Regional Career Education Program conducted in eight Eastern Kentucky counties. The data base, collected in the 1974 study (Phase 1), was used to provide comparisons and to identify changes over time. Teachers who participated in the implementation of career education programs were given a Teacher Questionnaire and personal interviews to determine teacher's knowledge of and attitudes toward career education, the most to least effective methods of implementing career education, and problems affecting the success of career education. The student component, group samplings from grades 4, 6, 8, and 11, involved the use of a quasi-experimental design to study the effect of the career education program on the variables of academic achievement, career maturity, student attitudes, and student motivation. An extensive discussion of the findings are presented, supplemented by 62 tables. Recommendations relate to findings concerning both the staff and student components. A bibliography and the Teacher Questionnaire are included. (TA)

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FINAL REPORT

EFFECTS OF A PROGRAM OF CAREER EDUCATION IN KENTUCKY'S EDUCATION REGION XII

PHASE TWO

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July, 1976

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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COMMONWEALTH OF KENTUCKY
STATE DEPARTMENT OF EDUCATION
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CE 009 318

PREFACE

This report contains the results of a second phase of a project designed to assess the effects of a Regional Career Education Program conducted in eight Eastern Kentucky counties. The original study was conducted during the 1973-74 school year, the first full year of the program's operation. Longitudinal research was originally planned, but not funded. However, the base data collected in 1974 were utilized in the present study to provide comparisons and identify changes over time.

As was the case with the original study, no effort was made to personally evaluate the Regional Career Education Staff. Rather, the purpose was to assess the effects which the program had on students, and to identify effective and/or ineffective practices and procedures.

These results, coupled with the original study, and other such efforts since generated, may be utilized by educational planners in the Commonwealth and elsewhere as input into planning and decision-making as it relates to Career Education.

In the previous study, data were gathered relative to four major components: (1) Community, (2) Professional Staff, (3) Students, and (4) Project Management. The present study was limited to Students and Professional Staff, with a separate findings chapter developed for each component.

ACKNOWLEDGEMENTS

The assistance of several people was necessary for the successful completion of this research effort, assistance which, for the most part, represented donated service by educators interested in extending the data base relative to Career Education.

First, thanks are extended to the Hazard Region Career Education Staff who provided invaluable assistance in drawing the student samples, gathering student data, and preparing lists of teachers involved in the Career Education program, the teachers who themselves are to be thanked for providing the data necessary for the Professional Staff Component of this study. Special thanks here are extended to Dr. Owen Collins, Hazard Project Director; Harlan Woods and Avery Stidham.

The efforts of Department of Education personnel are also appreciated – Mr. Charles Morgan of the State Testing Program and Dr. Glen Davis of the Bureau of Vocational Education.

Of particular value to this project were the efforts of two primary consultants: Mr. Peter Malpass for his statistical/computer assistance and Dr. Edward Thomas for his input to the preparation of the Final Report. Mr. Bernie Lovely also contributed to the latter effort.

Special appreciation is reserved for Ms. Joan Lattimore, who worked as project assistant, Mrs. Anne Mills, project secretary, and Mrs. Sheila Onkst, report typist.

TABLE OF CONTENTS

Page

PREFACE i

ACKNOWLEDGEMENTS iii

LIST OF TABLES vi

CHAPTER 1 – INTRODUCTION 1

Statement of the Problems 1
Review of Literature 2
Scope and Limitations 7
Objectives 8
Hypotheses 9
Description of the Region 9

CHAPTER 2 – PROCEDURE 11

Population and Sample 11
Data Collection and Instrumentation 11
Data Analysis 16

CHAPTER 3 – FINDINGS - STUDENT COMPONENT 19

Academic Achievement 19
Attitudes 25
Career Maturity 28
Motivation 33

CHAPTER 4 – FINDINGS - PROFESSIONAL STAFF COMPONENT 37

Tabulated Responses 37
Open-End Questions 72

CHAPTER 5 – SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS 89

Student Component 89
Professional Staff Component 97

BIBLIOGRAPHY 105

APPENDIXES

A. Teacher Questionnaire – Hazard Career Education Project

B. Kentucky's Regional Education Structure

LIST OF TABLES

Table No. Page

1 Analysis of Variance for CTBS Scores of Fourth Grade Students (Sex X Group) 20

2 Analysis of Variance for CTBS Scores of Fourth Grade Students (By Sex and By Group) 21

3 Analysis of Variance for CTBS Scores of Eighth Grade Students (Sex X Group) 22

4 Analysis of Variance for CTBS Scores of Eighth Grade Students (By Sex and By Group) 23

5 Analysis of Variance for CTBS Scores of Eleventh Grade Students (Sex X Group) 24

6 Analysis of Variance for CTBS Scores of Eleventh Grade Students (By Sex and By Group) 24

7 Analysis of Variance for Attitude Scores of Fourth Grade Students (Sex X Group) 25

8 Analysis of Variance of Attitude Scores for Fourth Grade Students (By Sex and By Group) 26

9 Analysis of Variance for Attitude Scores of Eighth Grade Students (Sex X Group) 26

10 Analysis of Variance for Attitude Scores of Eighth Grade Students (By Sex and By Group) 27

11 Analysis of Variance for Attitude Scores for Eleventh Grade Students (Sex X Group) 27

12 Analysis of Variance for Attitude Scores of Eleventh Grade Students (By Sex and By Group) 28

13 Analysis of Variance for CMI Scores of Sixth Grade Students (Sex X Group) 29

14 Analysis of Variance for CMI Scores of Sixth Grade Students (By Sex and By Group) .30

15 Analysis of Variance for CMI Scores of Eighth Grade Students (Sex X Group) 30

16 Analysis of Variance for CMI Scores of Eighth Grade Students (By Sex and By Group) .31

LIST OF TABLES (Continued)

Table No. Page

17 Analysis of Variance for CMI Scores of Eleventh Grade Students (Sex X Group) 32

18 Analysis of Variance for CMI Scores of Eleventh Grade Students (By Sex and By Group) 32

19 Analysis of Variance for JIM Scale Scores of Eighth Grade Students (Sex X Group) .33

20 Analysis of Variance for JIM Scale Scores of Eighth Grade Students (By Sex and By Group) 34

21 Analysis of Variance for JIM Scale Scores of Eleventh Grade Students (Sex X Group) .34

22 Analysis of Variance for JIM Scale Scores of Eleventh Grade Students (By Sex and By Group) 35

23 Teacher Ranking of Who Was the Most Effective in Increasing Their Knowledge and Understanding of Career Education by Sex (Individuals Ordered for Total) 38

24 Teacher Ranking of Who Was the Most Effective in Increasing Their Knowledge and Understanding of Career Education by Teacher Age .39

25 Teacher Ranking of Who Was Most Effective in Increasing Their Knowledge and Understanding of Career Education, by Level Primarily Taught 40

26 Teacher Ranking of Which Activities Were the Most Effective in Increasing Their Knowledge and Understanding of Career Education by Sex (Activities Order for Total by 1976 Rankings) 41

27 Teacher Ranking of Which Activities Were the Most Effective in Increasing Their Knowledge and Understanding of Career Education, by Teacher Age 41

28 Teacher Ranking of Which Activities Were the Most Effective in Increasing Their Knowledge and Understanding of Career Education, by Level Primarily Taught 42

LIST OF TABLES (Continued)

Table No. Page

29 Teacher Ranking of Which Activities Were the Most Effective in Conveying Career Education Concepts to Students, by Sex 43

30 Teacher Ranking of Which Activities Were Most Effective in Conveying Career Education Concepts to Students, by Teacher Age 44

31 Teacher Ranking of Which Activities Were Most Effective in Conveying Career Education Concepts to Students, by Level Primarily Taught 44

32 Teacher Ranking of the Most Effective Method of Securing Resource Persons for a Class, by Sex 45

33 Teacher Ranking of the Most Effective Method of Securing Resource Persons for Class, by Teacher Age 46

34 Teacher Ranking of the Most Effective Method of Securing Resource Persons for a Class, by Level Primarily Taught 47

35 Teacher Rankings of the Most Effective Method of Motivating Students, by Sex 48

36 Teacher Ranking of the Most Effective Method of Motivating Students, by Teacher Age 48

37 Teacher Ranking of the Most Effective Method of Motivating Students, by Level Primarily Taught 49

38 Teacher Ranking of the Most Important Determiner of Program Success in Career Education, by Sex 50

39 Teacher Ranking of the Most Important Determiner of Program Success in Career Education, by Teacher Age 51

40 Teacher Ranking of the Most Important Determiner of Program Success in Career Education, by Level Primarily Taught 51

41 Teacher Opinion of How Knowledgeable Various Publics Were About Career Education, by Sex (opinion recorded on a 1, high, to 5, low, scale) 52

LIST OF TABLES (Continued)

Table No. Page

42 Teacher Opinion of How Knowledgeable Various Publics Were About Career Education, by Teacher Age (opinion recorded on a 1, high, to 5, low, scale .53

43 Teacher Opinion of How Knowledgeable Various Publics Were About Career Education, by Level Primarily Taught, (opinion recorded on a 1, high, to 5, low, scale) 54

44 Teacher Opinion of How Positive an Attitude Various Publics Had Toward Career Education, by Sex (opinion recorded on a 1, high, to 5, low, scale) 55

45 Teacher Opinion of How Positive an Attitude Various Publics Had Toward Career Education, by Teacher Age (opinion recorded on a 1, high, to 5, low, scale) 56

46 Teacher Opinion of How Positive an Attitude Various Publics Had Toward Career Education, by Level Taught (opinion recorded on a 1, high, to 5, low, scale) 57

47 Teacher Opinion Concerning the Severity of Various Problems Encountered in Implementing the Career Education Program, by Sex (opinion recorded on a 1, no problem, to 4, much problem, scale) 58

48 Teacher Opinion Concerning the Severity of Various Problems Encountered in Implementing the Career Education Program, by Teacher Age (opinion recorded on a 1, no problem, to 4, much problem, scale) 61

49 Teacher Opinion Concerning the Severity of Various Problems Encountered in Implementing the Career Education Program, by Level Taught (opinion recorded on a 1, no problem, to 4, much problem, scale) 64

50 Number of Field Trips and Resource Persons, by Teacher Sex 66

51 Number of Field Trips and Resource Persons, by Teacher Age 66

52 Number of Field Trips and Resource Persons, by Level Taught 66

53 Involvement of Parents in Career Education by Sex, Age, and Level Taught 67

LIST OF TABLES (Continued)

Table No. Page

54 Teacher Opinion of the Future of Career Education in Their School When Project Funding Ends and a Regional Staff is No Longer Available, by Sex 68

55 Teacher Opinion of the Future of Career Education in Their School When Project Funding Ends and a Regional Staff is No Longer Available, by Teacher Age 68

56 Teacher Opinion of the Future of Career Education in Their School When Project Funding Ends and a Regional Staff is No Longer Available, by Level Taught 69

57 Teacher Opinion of the Future of Career Education in the Total Region When Project Funding Ends and a Regional Staff is No Longer Available, by Sex 69

58 Teacher Opinion of the Future of Career Education in the Total Region When Project Funding Ends and a Regional Staff is No Longer Available, by Teacher Age 70

59 Teacher Opinion of the Future of Career Education in the Total Region When Project Funding Ends and a Regional Staff is No Longer Available, by Level Taught 70

60 Teacher Opinion of the Impact of the Regional Career Education Program by Sex 71

61 Teacher Opinion of the Impact of the Regional Career Education Program by Age 71

62 Teacher Opinion of the Impact of the Regional Career Education Program by Level Taught 71

CHAPTER I

INTRODUCTION

Early in this decade, interest in Career Education was focused on determining whether the concept offered a viable alternative to the curriculum patterns and instructional programs then in wide use. Educational researchers, curriculum specialists, and teacher educators have expended much time, energy, and money in efforts to determine whether Career Education, in some form, is here to stay or just a passing educational fad. The evidence to date suggests that Career Education is, indeed, viable and worthy of the commitment to it demonstrated by local, state, and national educational agencies.

However, as with any new program or approach in education, there are myriad problems to be solved. This study was an attempt to isolate some of those problems and identify their implications concerning adopting Career Education programs in Kentucky.

More specifically, this study was directed toward the effects and/or implementation procedures relating to Career Education's relationship to Professional Staff and Students. The results of the study can be utilized by the State Department of Education for planning future Career Education efforts in the Commonwealth, by the College of Education at the University of Kentucky for affecting changes in the teacher education program, and by the Kentucky Valley Educational Cooperative (Region XII) in evaluating their program and generating recommendations for that program or for generalized recommendations to the State Department of Education.

Statement of the Problems

In Kentucky, the State Department of Education has the responsibility for providing leadership in the planning and evaluation of various educational programs. To be effective, such activity must be coordinated with the work of the State Universities. One area where the State Department and the Universities will be called upon for leadership will be in the planning of inservice and preservice education programs for teachers and prospective teachers. The purpose of these programs will be to orient present and prospective teachers, counselors, and administrators to the Career Education concept and help them identify their roles in implementing Career Education activities in the schools of Kentucky.

Before Career Education can be fully implemented and successfully operated in Kentucky, the concept must be fully understood by teachers and a commitment to the concept must be demonstrated. Commitment to a concept rests, to a large degree, within the affective or attitudinal component of a person's experience. Thus, if teachers are to embrace Career Education, they must have positive attitudes toward the concept and its implementation. The development of these positive attitudes can be built into preservice and inservice education programs and experiences.

There exists, then, a contrasting state of affairs relative to Career Education in Kentucky. On the one hand, planners and evaluators of preservice and inservice teacher education programs need information about the current status of Career Education programs relative to professional staff development. That is, they need to know what perceptions teachers have concerning the Career Education effort. Also, they need information about impact on students – what impact is Career Education having on the product (i.e., the students)? On the other hand, there exists limited information about the professional staff and student components of the Career Education programs.

One problem undertaken in this study was ascertaining what constitutes an effective professional staff development component for Career Education, including teacher perceptions and teacher characteristics.

All education programs should ultimately be evaluated as to their effects on students. A second research problem then became, what is the effect of a Career Education program on such student variables as: attitude toward school, school subjects, and others; achievement level; career maturity; and, motivation?

More specifically, the total problem under investigation was: "What is the effect of a Career Education program on students and staff?"

Review of Literature

Problematic Literature

Much of the writing and speechmaking concerning Career Education has focused on the changes which are prerequisite to the successful implementation of Career Education programs in the public schools.

For example, the Sixth Annual National Vocational and Technical Teacher Education Seminar, conducted in 1972 by the Center for Vocational and Technical Education of The Ohio State University, was concerned with "Implications of Career Education for Teachers' Preparation." ("Implications of Career Education," 1973) Most of the presentations stressed changes which must come about in professional roles, preservice and inservice teacher education, and in professional development activities if Career Education is to truly infuse the entire educational program from "cradle to grave."

But such changes will not come about because changes are called for by speakers and writers. Changes come about as a response to problems which are identified. Thus, in order to understand the change process, we must come to grips with the problems encountered by those who attempt to implement Career Education programs.

The problems identified earlier were brought to light by recent developments in the implementation of Career Education. The U.S. Office of Education has established the development and implementation of Career Education models as one of the very few major priority areas. In fact, in 1972, former U.S. Commissioner of Education Sidney P. Marland, Jr., labeled Career Education as the major objective of the U.S. Office of Education and suggested that it would be a top priority for the forseeable future (Marland, p. 1477). This has been the case.

In Kentucky, The State Department of Education has also designated the development of Career Education models as a priority item. Several school systems or regions in Kentucky have been operating exemplary or pilot projects in Career Education for a year or longer. All of these projects have been supported with vocational education funds through the Kentucky Bureau of Vocational Education and/or the U.S. Office of Education.

As a result of the commitment to Career Education exhibited by the State Department of Education, a real need exists in Kentucky for information on which to base: (1) the planning and evaluation of teacher education programs, and (2) the development of procedures for implementing Career Education at the local level. Existing programs may have to be modified if Career Education is to operate effectively in Kentucky schools. Swanson (March 1972, pp. 81-82) points out that Career Education can only be implemented by beginning a massive program of inservice training for elementary and secondary teachers in the public schools. He says that it is necessary to begin simultaneously a flow of adequately trained teachers from the teacher education institution. Bottoms (1972, pp. 89-92) sees much of the responsibility for affecting implementation and changes in staff development as being that of the state department of education. Career Education must infuse the entire teacher education process which includes the development of positive attitudes toward Career Education.

The importance of the attitudinal component has been pointed out by Hoyt et al (1972). They stress that one essential element in the development of Career Education programs is the attitude of professional educators toward work and education as preparation for work. The implication is that professional educators at the present time do not have desirable attitudes toward these two concepts. Furthermore, these attitudes must be changed if Career Education becomes more than just a new name tacked onto what we are already doing.

Not only must we change the attitudes of professional educators already in the field, but we must drastically change our teacher education programs in the colleges and universities if prospective teachers are to exhibit positive attitudes toward Career Education and possess the necessary competencies to teach in a system which emphasizes the Career Education concept.

Apparently, the problems associated with Career Education implementation vary widely depending on several factors: the educational philosophy of the school; the commitment of teachers and administrators to the concept; the setting of the school (rural, urban, suburban); the size of the school or system; the proximity to usable community resources; the backgrounds and abilities of professional personnel; the understanding and acceptance of the community; and the cooperation of local colleges and universities in designing and offering support programs.

For example, Swanson states, "Career Education is most easily implemented in large school systems and most difficult in small districts." (Swanson, 1972, p. 117) He further stated that implementing Career Education at the elementary and middle school levels presents problems not found at other levels. But what are the problems inherent in such settings? What problems do educators face who are in rural areas or in small school districts? Do the problems differ according to the grade level of the programs? What can be done to overcome the problems; These are questions which must be answered if Career Education is to make the impact which so many think it can.

Empirical Literature

Since 1971, when the Career Education Movement began to impact public education programs on a nationwide basis, literally thousands of Career Education programs, projects, workshops, courses, and seminars have been operated. Most of the literature on Career Education which has been generated in the last five years has been concerned with defining Career Education, promoting Career Education, or describing the processes and products of

Career Education. So far, little in the way of empirical research has been reported. However, a few studies of program outcomes are available. The following is a discussion of some selected research reports and articles which present information about the effect of Career Education on students and professional staff.

Perhaps of most importance to the present study is the study of the effect of the Career Education effort in Region XII during its first year of operation (Omvig, 1974).

The student component of the study was designed to assess the effect of the Career Education program on such student variables as academic achievement, attitudes, career maturity, motivation, occupational aspiration, and absenteeism. A sample of fourth, sixth, eighth, tenth, and eleventh grade students participated in the study. A pretest-posttest research design was utilized to collect data. The analysis of covariance technique was used to test for differences between Career Education and Non-Career Education students on the criterion variables. Pretest scores were used as covariates in the analysis to adjust for possible initial group differences.

In summary form, the following conclusions were reached concerning the student component:

1. Academic achievement levels did not vary to any great extent between the groups. This was expected since a one-year time frame is probably too short for significant academic achievement level changes.

2. Attitude scores did not vary to a great extent between groups, although the Career Education students seemed to consistently have higher (non-significant) attitude scores. On a few variables at various grade levels, Career Education students did display significantly higher attitude scores. Again, a one-year time frame might have been too short for measurable differences to develop.

3. Career Maturity levels were higher, overall, for the Career Education students; significant differences were detected on several subscores among the various grade levels.

4. Motivation scores were not significantly different between the two groups. In fact, scores tended to decrease from the pretest to posttest. However, Career Education students' motivation levels were consistently higher than Non-Career Education students.

5. Absenteeism rates were not significantly affected by the type of program, although Career Education students missed fewer days than Non-Career Education students.

6. Occupational Aspiration scores for Career Education and Non-Career Education students were not significantly different. Again, the one-year time period may have been too short for real differences to appear.

In general, it was concluded that Career Education tended to have an effect on student achievement, attitudes, etc. Where significant differences were found, they were in favor of Career Education students and these students consistently displayed higher scores on non-significant comparisons.

The Professional Staff Component was designed to assess the knowledge and attitude of staff members concerning Career Education, identify factors which contributed to the successful development of a Career Education program, identify successful personnel development techniques, and identify problems encountered in implementing Career Education.

The study utilized a pretest-posttest design to measure teacher knowledge and attitude changes. The Career Education Information Inventory was used to collect data on these variables. A Teacher Questionnaire and personal interviews were utilized to collect data in the other variables mentioned above. The general conclusions are summarized below:

1. Attitude and knowledge scores were affected by teacher age groups, but no consistent patterns were observed. Differences were also detected among teachers on the basis of grade level taught. Again, consistent patterns were not observed. No significant differences were found between rural and small-town teachers. The pretest-posttest comparison of knowledge and attitude scores showed a significant gain in knowledge of Career Education concepts by teachers; attitudes did not change significantly.

2. Teacher Questionnaire and interview results led to the following conclusions:

    a. Teachers were generally in agreement concerning: (1) what were the most effective and least effective means of increasing teachers' knowledge and understanding of Career Education; (2) what were the most effective and least effective means of conveying Career Education concepts to students; (3) what were the most effective and least effective means of securing resource persons and motivating students; (4) what were the factors which contributed to program success.

    b. Teachers felt that most implementation problems centered around a lack of resources, especially time and money.

    c. Teachers felt that the Career Education program provided many rewarding experiences. The most often mentioned rewards were: (1) high interest and enthusiasm of students; (2) development of different career interest in students; and (3) participation and involvement of all students.

d. Teachers were able to overcome the major implementation problems identified by: (1) substituting, borrowing, adapting, and developing needed materials, (2) sharing planning responsibilities, (3) stepping up the integration of Career Education concepts with academic subjects, (4) increasing participation in workshops and other inservice activities, and (5) increased use of community resources.

e. Teachers felt that problems could be overcome through increasing funding levels, providing more planning time, increasing the sharing and development of materials, and providing for more inservice training and Career Education workshops.

A few other studies have been reported, most being concerned with the effect of Career Education on academic achievement of elementary school children. Olson (1974) wrote about a comparison between the achievement of elementary students who had been exposed to Career Education concepts and similar students who had not been exposed to such concepts (other than those traditionally taught in elementary classes). The Career Education group scored higher in language and mathematics achievement than did the Non-Career Education group.

Purcell (1974) reported similar results when groups of second graders (Career Education vs. Non-Career Education) were compared on the basis of reading scores. Career Education students scored significantly higher on a reading test than did Non-Career Education students.

Smith (1974) also reported that similar results were obtained in a Maryland school district where differences in academic achievement were identified; the students exposed to Career Education concepts were found to have the higher scores.

Although few empirical studies have been reported, the likelihood is that many more such evaluative undertakings will be reported in the near future, especially if school systems are to depend on external funding to any great extent in the future.

Scope and Limitations

Because of funding levels for the evaluation of the Career Education project, a complete replication of the 1974 study could not be undertaken. Therefore, it was decided that only the Professional Staff and Student Components would be included in the present study. Likewise, it was decided to limit the study of teacher involvement to a consideration of their perceptions concerning several Career Education events, groups, and activities encountered during the 1975-76 school year. Furthermore, instead of gathering pretest and posttest data on students during the year, only posttest data were collected on the 1975-76 group of students. The 1974 Non-Career Education student data were utilized as control group data in the analyses of program effects on student variables.

Objectives

The study was divided into two parts. One part was a study of the Professional Staff Component of the Career Education Program in Kentucky's Education Region XII. The other part was a study of the Student Component of the program. The evaluation project objectives for each of the parts are presented below. Overall objectives are first stated and specific objectives are then outlined.

Professional Staff Component

The overall objective of this part of the study was to determine the perceptions of professional staff members concerning the implementation of Career Education in public school programs. More specifically, the objectives were:

1. To identify factors which contribute to the development and expansion of Career Education within schools.
2. To identify personnel development techniques and strategies which are perceived as most effective by personnel in Career Education programs.
3. To identify: (a) problems encountered by personnel in implementing Career Education as a part of the ongoing educational process, and (b) techniques and procedures used to overcome the problems encountered.
4. To identify the perceptions of personnel relative to: (a) the impact of Career Education on students and the educational program, and (b) the probable results of decreased funding of Career Education.

Student Component

The overall objective of this section of the study was to assess the effects of Career Education programs, services, and activities on students. The specific objectives were:

1. To determine the effect of the Career Education program on student academic achievement.
2. To determine the effect of the Career Education program on the career maturity of students.
3. To determine the effect of the Career Education program on the attitude of students toward school, toward school subjects, and toward others.

4. To determine the effect of the Career Education program on student motivation.

Hypotheses

Several hypotheses were tested in the Student Component phase of the study. The major hypotheses, stated in the null form, were:

Null Hypotheses 1: There is no significant difference in basic academic skills, as measured by the California Comprehensive Tests of Basic Skills, between a group of students who participated in a Career Education program and a group which participated in a traditional educational program.

Null Hypothesis 2: There is no significant difference in career maturity levels, as measured by the Career Maturity Inventory, between a group of students who participated in a Career Education program and a group which participated in a traditional educational program.

Null Hypotheses 3: There is no significant difference in motivational levels, as measured by the Junior Index of Motivation, between a group of students who participated in a Career Education program and a group which participated in a traditional educational program.

Null Hypothesis 4: There is no significant difference in attitudes toward self, classmates, reading, school, math, and citizenship, as measured by the Kentucky Student Attitude Inventory, between a group of students who participated in a Career Education program and a group which participated in a traditional educational program.

There were also numerous sub-hypotheses since the major hypotheses listed above were tested at individual grade levels. And, since the analysis of variance procedure was used to test hypotheses, the main effect of sex was analyzed. Thus, sub-hypotheses concerning the effect of sex were also tested at each grade level under each of the major hypotheses.

Description of the Region

The Hazard Education Region (XII) is located in the southeastern part of Kentucky and is comprised of eight county and three independent school districts. The county systems include Letcher, Perry, Knott, Breathitt, Leslie, Lee, Owsley, and Wolfe. The three independent districts are Jackson, Jenkins, and Hazard. The regional office is located in Hazard, Kentucky (See Appendix B).

CHAPTER 2

PROCEDURE

Population and Sample

Professional Staff Development Component

The population utilized for this part of the study consisted of all the teachers in Kentucky's Educational Region XII who participated in the implementation of Career Education programs in their classrooms during the 1975-76 school year. Two hundred and two teachers represented the total population. Usable data were collected from 152 of these teachers (75%).

Student Component

The population for the Student Component consisted of all the students in Kentucky's Educational Region XII. Two sample groups were selected. The control group consisted of students who were enrolled during the 1973-74 school year but who were not exposed to the Career Education program. The data for this sample were collected in the Spring of 1974 (1974 bench-mark control data). The experimental group consisted of students enrolled during the 1975-76 school year who were exposed to the Career Education program. The assumption was made that students from the same grade across sequential years come from the same general population of students. Mr. Charles Morgan of the State Testing Program indicated that his analyses of State Testing Program data supported the assumption.

The sample groups both were made up of intact classes of fourth, sixth, eighth, and eleventh grade students. Four intact classes were randomly chosen from each of the first three grade levels (the same procedure was followed in collecting the Control Group samples). The eleventh graders were chosen from three high schools in 1976 and from four schools in 1974. The sample numbers were approximately 120 per group per grade. Data were analyzed for a total of 957 students.

Data Collection and Instrumentation

Professional Staff Component

To attain the objectives specified for this component, a Teacher Questionnaire and personal interviews were used. The Teacher Questionnaire was developed originally for the study during the 1973-74 school year (Omvig, 1974). Additional questions were added in 1976 to assess teacher perception of the impact of the project. Interviews with a random sample of teachers were used to validate the instrument initially, and to obtain confirmation of results. (Appendix A)

The Teacher Questionnaire contained a section which asked respondents to provide demographic information for use in analyzing the data and describing teacher characteristics. The following types of background information were included:

1. Age
2. Sex
3. Years of teaching experience
4. Years of work experience outside education
5. Subject area primarily taught
6. Grade level primarily taught

The second section of the instrument asked teachers to rank order several lists of responses concerning: (1) who (which group) was most to least effective in increasing their (teachers') knowledge and understanding of Career Education; (2) what activities were most to least effective in increasing their knowledge and understanding of Career Education; (3) what activities were most to least effective in conveying Career Education concepts to students; (4) what was the most to least effective method of securing resource persons for classes; (5) what was the most to least effective method of motivating students; and, (6) what was the most to least effective determiner of program success.

The third section of the instrument asked teachers to indicate whether they had involved parents in the Career Education program and, if so, in what way. Teachers were also asked to indicate how many field trips their classes took during the year and how many resource persons visited in their classes. This section also asked teachers: (1) to rank various groups as to how knowledgeable the groups were concerning Career Education, and (2) to rank the same groups as to their attitudes toward Career Education.

The fourth section of the instrument listed 26 potential problems which could affect the success of Career Education. The teachers were asked to indicate the extent to which each affected their own experience in implementing Career Education. Possible responses were: (1) No Problems, (2) Little, (3) Some, and (4) Much. The listing was adapted from an interview scale developed in a project directed by Eugene Harryman at Western Kentucky University (Ehresman, et al., 1973).

Three open-ended questions were also included in the fourth section to allow teachers to more fully describe their experiences in implementing Career Education in their schools.

First, they were asked to identify the most rewarding experience they had in working with students under the Career Education approach. Then they were asked to list the two most significant implementation problems encountered. Finally, they were asked to explain the techniques and procedures used to overcome each of the listed problems.

The final section of the instrument concerned teacher perceptions of the impact of the Career Education program in their own school system and within the total educational region. They were asked to estimate the impact (from No Impact to Much Positive Impact) and describe the ways in which the program had impacted the students, staff, and community. Also in the final section was an item asking teachers to indicate what they thought would happen in their own school system and in the total region when the project funding ended.

Student Component

A quasi-experimental design was used to study the effect of the Career Education program on the following selected student variables:

1. Academic Achievement
2. Career Maturity
3. Student Attitude
4. Student Motivation

The fourth grade sample groups completed the Kentucky Student Attitude Inventory (KSAI), which provided data relative to student attitude and the California Comprehensive Tests of Basic Skills (CTBS), which provided data relative to academic achievement. The sixth grade sample groups completed the Career Maturity Inventory (CMI), which provided data on career maturity. The eighth and eleventh grade sample groups completed the KSAI, the CTBS, the CMI, and the Junior Index of Motivation (JIM Scale), which provided data on student motivation.

KSAI. The KSAI was designed to assess student concepts of or attitudes toward: (1) self, (2) classmates, (3) reading, (4) school, (5) math, and (6) citizenship. All six attitudinal areas were tested for grades 8 and 11. Only the first five were tested for grade 4.

CTBS. The California Comprehensive Tests of Basic Skills (CTBS) is a testing series designed to test student skills in reading, language, arithmetic, and study skills (State-Wide Testing Program, p. 4). There are four levels in the testing program: Level 1 accommodates the second half of Grade 2 and Grades 3 and 4; Level 2 covers Grades 4, 5, and 6 overlapping Level 1 and Grade 4; Level 3 includes Grades 6, 7, and 8 overlapping Level 2 at

Grade 6; and Level 4 is addressed to Grades 8, 9, 10, 11, and 12 overlapping Level 3 at Grade 8.

Levels 2, 3, and 4 of the CTBS Battery include the following tests:

Reading Vocabulary
Reading Comprehension
Language Mechanics
Language Spelling
Arithmetic Computation
Arithmetic Concepts
Arithmetic Applications
Study Skills Using Reference Materials
Study Skills Using Graphic Materials

The total battery consists of 318 multiple-choice items; 85 items relate to Reading, 85 to Language, 98 to Arithmetic, and 50 to Study Skills. The tests were administered in accordance with the instructions outlined in the Examiner's Manual. Two to three days were required in most instances to administer the tests.

Eleven scores result from the scoring – ten scores representing each of the specific subtests and a total score on the battery. For each student on each subtest, an obtained grade equivalent score, percentile rank, and stamine were reported.

CMI. The Career Maturity Inventory (CMI) was utilized to collect data relative to the career maturity of students. The CMI, published by CTB/McGraw-Hill, measures variables common to two of Crites' dimensions of career maturity – Career Choice Competencies and Career Choice Attitudes. Formerly called the Vocational Development Inventory (VDI), the CMI consists of an Attitude Scale and a Competence Test which assess the two choice process dimensions mentioned to measure the following:

1. Orientation to the World-of-Work
2. Conceptions of Career Decision-Making
3. Involvement in Choice and Work
4. Independence in Career Choice
5. Preference for Factors in Career Choice (Crites, 1974, p. 2)

The Competence Test is composed of five subtests which assess the four stages of career choice. The four steps and the respective subtests are:

1. Information-gathering – Knowing Yourself – Knowing About Jobs

2. Goal-Selection – Choosing a Job
3. Planning – Looking Ahead
4. Problem-Solving – What Should They Do? (Crites, 1974, p. 2)

Crites states that the CMI is appropriate as an assessment technique in several settings. He further asserts when a Career Education program has been initiated, the CMI has special value in evaluating the effectiveness of the program (Crites, 1974, p. 2).

Numerous reliability and validity studies have been conducted with the CMI, especially the older Attitude Scale. Content validity for the Attitude Scale was established in a study of the agreement between the empirical scoring key and one derived "rationally" (Crites, 1973, p. 15). A panel of judges was asked to choose the more mature response to each attitude item. The judges agreed with the national standardization sample on 37 items (74%). Criterion related validity has been demonstrated in several studies which found significant correlations between the Attitude Scale and other scales which were designed to measure criterion variables directly (Crites, 1973, pp. 15-16). To establish construct validity, studies were conducted to assess response bias (response set bias and response style bias were found to be negligible) and correlation with other variables (most background variables were not related to the scale; the scale correlated significantly with several intelligence, aptitude, and personality scales) (Crites, 1973, pp. 16-21).

Reliability studies showed an overall internal consistency coefficient of .74 for grades 6 through 12. The test-retest reliability (stability) coefficient was .71, a correlation which was termed "low enough to allow for maturational variance but high enough to establish systematic measurement of the variable being quantified" (Crites, 1973, p. 14).

The Competence Test has not been used as long as the Attitude Scale; thus, the number of studies using this section of the CMI is smaller. Internal consistency measures are available, however most of the correlations within subtests range from .72 to .90, establishing that the five parts of the test consits of relatively homogeneous sets of items (Crites, 1973, p. 33).

Some validity studies have also been conducted. Content and criterion-related validity were demonstrated in studies which showed the test to be systematically related to time (expressed as grade levels). The product-moment correlation among the five subtests was found to be .54, within the range of the approximate correlation hypothesized from the construct (Crites, 1973, pp. 34-35).

JIM Scale. The Junior Index of Motivation (JIM Scale) was used to access students' motivation toward school. The instrument, developed by Jack R. Frymier at the Ohio State University, consists of 80 items and requires approximately 30 minutes of administration. However, only 50 items are scored.

Frymier has conducted extensive studies of the reliability and validity of the JIM Scale for use with public school and college students. Nine separate studies were reported, eight of which were concerned with developing the scale and testing its reliability and validity and one to determine the specific content of the Scale. Each succeeding study was undertaken to answer questions or solve problems encountered in earlier studies.

Frymier reports a test-retest reliability of .70 from a sample of 718 junior high school students (369 boys, r = .74; 349 girls, r = .63). Split-half reliability coefficients of correlation were .63 for 139 boys and .72 for 104 girls and a total group (N=243) coefficients of .67. Similar results were obtained with samples of high school students and college students. The JIM Scale was also found to correlate significantly with another motivation scale (Farquhar's M-Scale) and with achievement tests (Iowa Tests of Educational Development) (Frymier, p. 78).

A factor analysis study was designed to identify the content of the JIM Scale. The six largest rotated factors accounted for 51 percent of the variance and these factors were assigned the following names:

I. Belongingness – Alientation
II. Positive School Attitude – Negative School Attitude
III. Personal Control – Fatalism
IV. Optimism – Pessimism
V. Flexibility – Dogmatism
VI. Idealism – Pragmatism (Frymier, p. 85)

Data Analysis

Professional Staff Development Component

The data from the Teacher Questionnaire were analyzed chiefly through the method of computing means and rank orders for most items, especially those from Section II and IV of the instrument. Demographic variables were used to classify respondents on the basis of age, sex, and grade level taught. Some items from Sections III, IV, and V were tabulated and analyzed in order to relate them to evaluation objectives concerning: (1) the extent to which the community and its resources were utilized, (2) problems encountered and solutions used to overcome them, and (3) the impact of the Career Education program and the probable consequence resulting from the cessation of funding for the program. The list of 26 potential problems contained in Section IV was coded by assigning point values to the four possible responses: a score of "1" meant the item presented "No Problem"; "2" meant "Little Effect"; "3" meant "Some Effect"; and "4" meant "Much Effect."

Student Component

Means were generated for all student groups – Career Education and Non-Career Education; males and females. Further, the analysis of variance technique was utilized to test the hypotheses concerning the effect of Career Education on student variables. A two-by-two (Sex by Group) analysis was first performed to determine if an interaction between sex and group membership was operating. Then the main effects (Sex and Group) were investigated.

CHAPTER 3

FINDINGS
STUDENT COMPONENT

Presented in this chapter are the findings relative to the Student Component of the study. Data were collected from fourth, sixth, eighth, and eleventh grade students. Several instruments were used to collect data on the following variables:

1. Academic Achievement
2. Career Maturity
3. Attitude
4. Motivation

These were the areas covered by the objectives and hypotheses outlined previously for the Student Component.

The data analyses were conducted to identify significant differences among Career Education and Non-Career Education students. The results of the analyses provide a basis for: (1) drawing conclusions relative to the hypotheses stated, (2) identifying implications from the findings for improving education in the public schools, and (3) making recommendations concerning Career Education in the Hazard Region and elsewhere.

Findings concerning each of the four areas listed above are presented separately in this chapter. Within each presentation section, the findings are arranged by grade level.

Academic Achievement

The CTBS was utilized to measure academic achievement levels of fourth, eighth, and eleventh grade students. CTBS scores were reported as grade equivalent scores.

The CTBS battery included two subtests on reading achievement (Vocabulary and Comprehension), three on language achievement (Mechanics, Expression, and Spelling), three on arithmetic achievement (Computation, Concepts, and Applications), and two on study skills achievement (Using Reference Materials and Using Graphic Materials). An eleventh score (Total) was a composite score based on the first eight subtest scores.

The analysis of variance technique was employed to test for significant differences between sample groups. Interaction effects and main effects of "Sex" and "Group" were analyzed.

Table 1 presents the analysis of variance results for fourth graders. The table included the variable names, the computed subgroup means, the computed F-value for interaction of main effect variables, and the associated probability level.

An inspection of Table 1 reveals that none of the F-values were significant. Thus, there appeared to be no interaction of the two main effects (Sex and Group). In fact, the magnitude of most F-values was such as to indicate an almost total absence of interaction. The variables were acting independently.

Table 1. Analysis of Variance for CTBS Scores of Fourth Grade Students (Sex X Group)

Variable:	CAREER ED.		NON-CAREER ED.		F-Value	Prob.
	Males $\overline{X}$	Females $\overline{X}$	Males $\overline{X}$	Females $\overline{X}$		
Reading						
Vocabulary	4.45	4.65	4.08	4.16	0.24	.99
Comprehension	4.31	4.89	4.15	4.29	0.60	.56
Language						
Mechanics	4.44	4.96	4.47	4.74	0.14	.71
Expression	4.23	4.61	4.23	4.59	0.02	.99
Spelling	3.96	4.86	3.73	4.52	0.96	.99
Mathematics						
Computations	4.42	4.87	4.16	4.41	0.56	.99
Concepts	4.27	4.41	4.33	4.01	1.72	.19
Applications	4.45	4.34	4.29	3.93	0.85	.64
Total	4.24	4.63	4.09	4.25	0.07	.79
Study Skills						
References	4.47	5.21	4.10	4.81	0.84	.99
Graphics	4.58	4.80	4.19	4.32	0.23	.99

The two main effects were then analyzed and the results of the analysis of variance are presented in Table 2.

The analysis summarized in Table 2 reveals that Sex, when used as a main effect, produced significant differences on five of the 11 CTBS scores. In all cases where significant differences were found, females had the higher means; in fact, females outscored males on nine of the 10 subtests and also on the Total computed for the Reading, Language, and

Mathematics subtests. Only on Math Concepts and Math Applications did males score higher and in both instances, the differences were non-significant.

Table 2. Analysis of Variance for CTBS Scores of Fourth Grade Students (By Sex and By Group)

Variable:	SEX Males $\bar{X}$	 Females $\bar{X}$	 F-Value	 P	GROUP Career $\bar{X}$	 Non-Career $\bar{X}$	 F-Value	 P
Reading								
Vocabulary	4.26	4.44	1.08	.30	4.56	4.12	6.69	.01*
Comprehension	4.23	4.64	4.05	.04*	4.63	4.22	4.11	.04*
Language								
Mechanics	4.45	4.87	3.12	.08	4.73	4.60	0.31	.59
Expression	4.23	4.60	3.00	.08	4.44	4.41	0.02	.87
Spelling	3.85	4.72	18.53	.00*	4.46	4.11	2.95	.08
Mathematics								
Computations	4.29	4.67	7.87	.01*	4.67	4.28	8.21	.00*
Concepts	4.30	4.24	0.11	.74	4.35	4.18	0.94	.66
Applications	4.37	4.16	1.42	.23	4.39	4.12	2.43	.12
Total	4.17	4.47	4.53	.03*	4.46	4.17	4.30	.04*
Study Skills								
References	4.29	5.04	10.43	.00*	4.87	4.43	3.56	.06
Graphics	4.39	4.59	0.97	.67	4.70	4.25	4.51	.03*

*p .05

When Group was used as the main effect, five significant differences were again identified. In all cases the Career Education group had the higher means. The F-values were especially large on the Vocabulary and Math Computation subtests. Perhaps of most significance was the fact that there was a significant difference on the Total Score which is a composite of the 8 Reading, Language, and Mathematics subtests.

The analyses of CTBA scores for eighth grade students are contained in Tables 3 and 4.

As shown in Table 3, when the CTBS scores were analyzed to detect possible interaction effects of Sex and Group, no statistically significant F-values were computed. Sex and Group did not interact in such a way as to affect academic achievement scores.

Table 3. Analysis of Variance for CTBS Scores of Eighth Grade Students (Sex X Group)

Variable:	CAREER ED.		NON-CAREER ED.			
	Males $\bar{X}$	Females $\bar{X}$	Males $\bar{X}$	Females $\bar{X}$	F-Value	Prob.
Reading						
Vocabulary	7.71	8.47	8.15	7.65	3.35	.07
Comprehension	8.65	9.45	8.02	7.85	2.01	.15
Language						
Mechanics	7.31	9.68	7.71	8.75	3.08	.08
Expression	8.20	9.29	8.02	8.35	1.32	.25
Spelling	7.39	9.32	7.82	8.68	1.92	.16
Mathematics						
Computations	8.53	8.97	7.82	8.31	0.82	.63
Concepts	8.44	8.53	8.27	8.29	0.03	.85
Applications	8.37	7.99	8.00	7.52	0.01	.99
Total	7.93	8.86	7.61	8.04	1.68	.19
Study Skills						
References	8.65	9.27	7.86	8.38	0.98	.68
Graphics	8.26	8.95	8.19	7.76	1.79	.18

When Sex and Group were then analyzed as main effects, a few significant differences were noted. The results of the analysis of variance are presented in Table 4.

Eighth grade females outscored males to a significant degree on two of the three Language subtests – Mechanics and Spelling. The difference in the Total Score approached significance (p = .07), again with females having the higher group mean. Males outscored females only on Math Applications. The pattern here was similar to that observed with the fourth grade students.

When Group was used as a main effect, two significant differences were identified. The Career Education group achieved significantly higher on the test of Reading Comprehension and on the Study Skill subtest using Reference Materials. In fact, the Career Education group outscored the Non-Career Education students on all subscores except Spelling, where they slightly out-performed Career Education students.

Table 4. Analysis of Variance for CTBS Scores of Eighth Grade Students (By Sex and By Group)

Variable:	SEX				GROUP			
	Males $\bar{X}$	Females $\bar{X}$	F-Value	P	Career $\bar{X}$	Non-Career $\bar{X}$	F-Value	P
Reading								
Vocabulary	7.89	8.00	0.11	.74	8.07	7.82	0.54	.53
Comprehension	8.40	8.54	0.13	.72	9.03	7.91	7.85	.01*
Language								
Mechanics	7.47	9.15	16.08	.00*	8.44	8.39	0.02	.89
Expression	8.13	8.76	1.96	.16	8.72	8.24	1.19	.18
Spelling	7.56	8.96	12.56	.00*	8.31	8.39	0.03	.85
Mathematics								
Computations	8.25	8.60	1.09	.30	8.74	8.14	3.40	.06
Concepts	8.37	8.39	0.00	.96	8.48	8.28	0.32	.58
Applications	8.23	7.73	1.97	.16	8.19	7.69	2.00	.15
Total	7.51	8.40	3.18	.07	8.38	7.89	2.22	.13
Study Skills								
References	8.34	8.77	1.24	.27	8.95	8.20	3.96	.05*
Graphics	8.2[illegible]	8.28	0.01	.91	8.59	7.91	2.54	.11

* p .05

Comparisons of eleventh graders' CTBS Scores are contained in Tables 5 and 6. Again, the interaction effect was tested first, then main effects were analyzed.

As can be seen in Table 5, there was an interaction of the classification variables Sex and Group ont he Spelling subtest. Analysis of the sub-group means presented in Table 5 reveals that the interaction was due to the low score achieved by the Career Education males.

An inspection of Table 6 reveals that there were significant differences between the males and females on three of the CTBS subtests. Females had significantly higher scores than males on two of the three Language subtests – Mechanics and Spelling. However, on the Math Applications subtest, males had the higher mean. No other significant differences were identified and the means on the Total Score are very similar.

On the comparison of Career Education to Non-Career Education students, no significant F-values appeared.

Table 5. Analysis of Variance for CTBS Scores of Eleventh Grade Students (Sex X Group)

Variable:	CAREER ED.		NON-CAREER ED.			
	Males $\overline{X}$	Females $\overline{X}$	Males $\overline{X}$	Females $\overline{X}$	F-Value	Prob.
Reading						
Vocabulary	9.75	9.27	9.51	9.81	1.24	.27
Comprehension	9.83	10.01	9.69	10.83	1.43	.23
Language						
Mechanics	8.93	9.83	9.87	10.98	0.06	.80
Expression	9.24	9.82	9.46	10.27	0.09	.76
Spelling	8.54	10.12	11.08	11.24	4.12	.04 *
Mathematics						
Computations	8.64	9.19	9.79	10.04	0.19	.66
Concepts	10.99	9.44	11.37	10.51	0.15	.70
Applications	9.58	8.72	10.54	10.07	0.17	.68
Total	9.11	9.35	9.95	10.26	0.09	.76
Study Skills						
References	8.96	8.82	9.61	10.34	0.94	.67
Graphics	9.45	8.61	10.34	10.33	0.81	.63

*p .05

Table 6. Analysis of Variance for CTBS Scores of Eleventh Grade Students (By Sex and By Group)

Variable:	SEX				GROUP			
	Males $\overline{X}$	Females $\overline{X}$	F-Value	P	Career $\overline{X}$	Non-Career $\overline{X}$	F-Value	P
Reading								
Vocabulary	9.68	9.42	0.71	.59	9.50	9.66	0.22	.64
Comprehension	9.79	10.24	1.59	.20	9.92	10.28	0.82	.63
Language								
Mechanics	9.19	10.15	6.49	.01*	9.95	10.45	3.14	.07
Expression	9.30	9.93	2.60	.10	9.55	9.87	0.53	.53
Spelling	9.21	10.40	13.77	.00*	10.36	11.16	3.01	.08
Mathematics								
Computations	8.94	9.41	1.98	.16	9.61	9.92	2.04	.14
Concepts	11.09	9.71	3.47	.06	10.18	10.93	0.79	.62
Applications	9.83	9.07	5.15	.02*	10.13	10.30	0.21	.64
Total	9.33	9.58	0.66	.58	10.24	10.11	0.78	.62
Study Skills								
References	9.13	9.21	0.05	.82	9.89	9.99	0.50	.51
Graphics	9.68	9.05	2.42	.12	10.01	10.33	1.94	.17

*p .05

Attitudes

The KSAI was utilized to test student attitudes toward self, classmates, reading, school, math, and citizenship. Student groups from the fourth grade completed the first five sections of the KSAI. The eighth and eleventh grades completed all six subtests.

The analyses of KSAI scores were carried out in a manner similar to the CBTS analyses. That is, tests for interaction of Sex and Group were completed first; then the main effects were analyzed.

The results of the analysis of variance of KSAI Scores for fourth grade students (Sex by Group) are summarized in Table 7 and 8.

The analysis of variance revealed that there were no significant interaction effects among the variables. F-values were generally very low and it appeared that the main effects (Sex and Group) were operating independently.

Table 7. Analysis of Variance for Attitude Scores of Fourth Grade Students (Sex X Group)

Variable:	CAREER ED. Males $\overline{X}$	CAREER ED. Females $\overline{X}$	NON-CAREER ED. Males $\overline{X}$	NON-CAREER ED. Females $\overline{X}$	F-Value	Prob.
Attitude Toward:						
Self	10.26	10.45	11.59	10.30	1.02	.31
Classmates	8.23	8.55	10.16	8.80	0.96	.67
Reading	10.30	9.63	11.61	9.41	1.12	.29
School	7.79	7.62	10.23	8.31	0.87	.65
Math	10.37	10.25	10.25	10.24	0.04	.83

The main effects were then tested with the analysis of variance procedure and the findings are presented in Table 8.

When Sex was used as the classification variable (main effect), no significant differences in attitudes were detected. Only one comparison (Attitude Toward Reading) approached significance.

When Career Education students were compared to Non-Career Education students, one significant difference was noted. On the measure Attitude Toward School, Non-Career Education students demonstrated a significantly higher score (a mean of 9.29 versus a mean of 7.69). All other comparisons showed no significant differences.

Table 8. **Analysis of Variance of Attitude Scores for Fourth Grade Students (By Sex and By Group)**

Variable:	SEX				GROUP			
	Males $\overline{X}$	Females $\overline{X}$	F-Value	P	Career $\overline{X}$	Non-Career $\overline{X}$	F-Value	P
Attitude Toward:								
Self	11.01	10.38	0.85	.65	10.37	10.95	0.73	.60
Classmates	9.32	8.67	0.71	.59	8.42	9.49	1.90	.17
Reading	11.04	9.66	3.15	.07	10.06	10.53	0.36	.55
School	9.17	7.95	3.09	.08	7.69	9.29	5.31	.02*
Math	10.30	10.25	0.04	.84	10.30	10.25	0.04	.89

*p .05

The tests for interaction of variables among the eighth grade students are displayed in Table 9.

Table 9. **Analysis of Variance for Attitude Scores of Eighth Grade Students (Sex X Group)**

Variable:	CAREER ED.		NON-CAREER ED.			
	Males $\overline{X}$	Females $\overline{X}$	Males $\overline{X}$	Females $\overline{X}$	F-Value	Prob.
Attitude Toward:						
Self	22.98	22.97	22.36	23.86	1.02	.31
Classmates	23.42	24.09	22.52	24.80	1.94	.16
Reading	19.89	21.85	19.48	23.05	2.48	.11
School	23.26	22.39	22.76	23.16	0.00	1.00
Math	20.88	19.23	19.33	20.41	0.00	1.00
Citizenship	22.72	23.09	22.91	23.48	0.40	.53

The Sex by Group comparisons of attitude scores for eighth grade students revealed no significant interactions. Again, the two main effects appeared to be operating independently.

The results of the main effects comparisons are presented in Table 10.

Table 10. Analysis of variance for attitude Scores of Eighth Grade Students (By Sex and By Group)

Variable:	SEX				GROUP			
	Males $\bar{X}$	Females $\bar{X}$	F-Value	P	Career $\bar{X}$	Non-Career $\bar{X}$	F-Value	P
Attitude Toward:								
Self	22.76	23.38	2.17	.14	23.42	22.77	2.39	.12
Classmates	23.09	24.42	10.35	.00*	24.10	23.56	1.72	.19
Reading	19.74	22.40	23.17	.00*	21.45	21.05	0.52	.52
School	23.08	22.75	0.48	.50	23.21	22.52	2.18	.14
Math	20.31	19.78	0.45	.50	20.65	19.27	3.13	.07
Citizenship	22.79	23.28	0.98	.68	23.10	23.03	0.02	.89

*p .05

Eighth grade females demonstrated significantly higher attitude scores than did males on two scales. Females had significantly more positive attitudes toward Classmates and Reading than did their male counterparts. In both cases, very large F-values were computed.

When Career Education and Non-Career Education student groups were compared, no significant differences were detected. Significance was approached on the Attitude Toward Math scale where Career Education students demonstrated a more positive attitude.

Presented in Table 11 were the comparisons for eleventh grade students.

Table 11. Analysis of Variance for Attitude Scores for Eleventh Grade Students (Sex X Group)

Variable:	CAREER ED.		NON-CAREER ED.			
	Males $\bar{X}$	Females $\bar{X}$	Males $\bar{X}$	Females $\bar{X}$	F-Value	Prob.
Attitude Toward:						
Self	22.50	23.89	22.36	22.86	0.65	.57
Classmates	22.91	23.70	22.48	22.95	0.07	.99
Reading	19.93	20.93	19.55	21.49	0.66	.58
School	22.44	22.77	23.24	21.81	3.01	.08
Math	17.98	17.44	15.64	17.51	2.62	.10
Citizenship	23.54	23.79	23.18	24.27	0.87	.65

The F-values computed when the variables were tested for interaction effects were all non-significant. Most F-values were very small (under 1.00) and the probability levels very high.

Table 12 contained the results of the main effects comparisons.

On two of the six attitude areas, females demonstrated significantly more positive attitudes than did males. Females had significantly better attitudes toward Self and Reading. The F-value on the Classmates scale approached significance; again, the females had the higher score. In fact, only on one scale (Attitude Toward School) did males have a higher score. The slight difference (22.75 versus 22.45) was non-significant.

Table 12. Analysis of Variance for Attitude Scores of Eleventh Grade Students (By Sex and By Group)

Variable:	SEX				GROUP			
	Males $\bar{X}$	Females $\bar{X}$	F-Value	P	Career $\bar{X}$	Non-Career $\bar{X}$	F-Value	P
Attitude Toward:								
Self	22.45	23.55	6.45	.01*	23.30	22.63	2.24	.13
Classmates	22.75	23.45	3.08	.08	23.36	22.73	2.35	.12
Reading	19.78	21.12	5.56	.02*	20.50	20.57	0.01	.91
School	22.75	22.45	.39	.54	22.63	22.49	0.08	.77
Math	17.09	17.46	.28	.61	17.67	16.63	2.00	.16
Citizenship	23.40	23.95	1.63	.20	23.69	23.76	0.03	.87

*p .05

No significant differences were found when Career Education and Non-Career Education groups were compared relative to attitudes.

Career Maturity

The career maturity levels of students were also measured and analyzed. Career Education and Non-Career Education students at the sixth, eighth, and eleventh grade levels participated in this phase of the study. They completed the two sections of the CMI (Competence Test and Attitude Scale). Five scores were reported on the Competence Test: (1) a self-appraisal score, (2) a knowledge of occupational information score, (3) a goal selection score, (4) a career planning score, and (5) a problem solving score. One score only was reported for the Attitude Scale.

The data analysis for the CMI scores was similar to that done on the KSAI and CTBS scores. Interaction effects were tested first; then main effects were investigated for those variables where no interaction was found.

The results of the analysis of variance run on sixth graders' CMI scores are presented in Tables 13 and 14. Table 13 contains the test for interaction.

Table 13. Analysis of Variance for CMI Scores of Sixth Grade Students (Sex X Group)

Variable:	CAREER ED. Males $\overline{X}$	CAREER ED. Females $\overline{X}$	NON-CAREER ED. Males $\overline{X}$	NON-CAREER ED. Females $\overline{X}$	F-Value	Prob.
Competence Test						
Self-Appraisal	8.28	10.25	7.84	8.98	0.00	1.00
Occupational Inf.	10.00	11.48	9.91	10.73	0.00	1.00
Goal Selection	8.62	9.73	8.15	8.59	0.00	1.00
Planning	9.15	11.22	8.28	9.60	0.00	1.00
Problem Solving	5.79	7.54	5.72	6.57	0.27	.61
Attitude Scale	28.23	30.97	26.99	27.68	0.05	.81

As can be seen in Table 13, extremely low F-values were computed on the Sex by Group comparison. In fact, because F-values were rounded off to two places, values of 0.00 were recorded for the first four measures. Naturally, the probability level associated with a score of 0.00 is 1.00, essentially meaning that there was a total lack of interaction effect on those variables. The F-values for the last two measures, Problem Solving and Attitude Scale, were also low, producing high probability levels.

Because of the absence of interaction, the main effects of Sex and Group membership were then tested. The results are presented in Table 14.

When Sex was used as a main effect, all six measures produced significant F-values. Females demonstrated the higher career maturity levels on all six comparisons. In fact, such high F-values were computed for Self-Appraisal, Planning, and Problem Solving, the associated probability levels were rounded to .00. Also, the differences on the other three variables were significant much beyond the .05 level.

Group Membership was also used as a main effect variable and significant differences were also noted. On the six CMI scores, Career Education students outscored Non-Career

Education students in every case. The differences were significant on four of the scores: Self-Appraisal, Goal Selection, Planning, and the Attitude Scale. Significance was approached on the Problem Solving scale, which had an F-value of 3.19 and a probability level of .07.

Table 14. Analysis of Variance for CMI Scores of Sixth Grade Students (By Sex and By Group)

Variable:	SEX				GROUP			
	Males $\bar{X}$	Females $\bar{X}$	F-Value	P	Career $\bar{X}$	Non-Career $\bar{X}$	F-Value	P
Competence Test								
Self-Appraisal	8.03	9.70	14.77	.00*	9.35	8.32	5.72	.02*
Occupational Inf.	9.95	11.14	6.10	.01*	10.80	10.26	1.24	.27
Goal Selection	8.36	9.22	4.41	.03*	9.22	8.34	4.67	.03*
Planning	8.67	10.50	14.15	.00*	10.29	8.85	8.63	.00*
Problem Solving	5.75	7.11	13.71	.00*	6.75	6.09	3.19	.07
Attitude Scale	27.53	29.50	7.52	.01*	29.72	27.28	11.51	.00*

*p .05

Several significant differences were also noted for eighth grade students. These analyses are summarized in Tables 15 and 16.

Table 15. Analysis of Variance for CMI Scores of Eighth Grade Students (Sex X Group)

Variable:	CAREER ED.		NON-CAREER ED.			
	Males $\bar{X}$	Females $\bar{X}$	Males $\bar{X}$	Females $\bar{X}$	F-Value	Prob.
Competence Test						
Self-Appraisal	10.52	12.47	8.80	11.43	3.46	.06
Occupational Inf.	12.20	13.93	10.77	12.93	2.08	.15
Goal Selection	11.32	11.65	10.09	10.41	0.36	.56
Planning	10.41	12.55	8.71	11.00	2.98	.08
Problem Solving	8.20	8.89	7.57	8.20	0.63	.57
Attitude Scale	31.34	32.95	28.71	31.37	2.06	.15

Interaction was checked first. As can be observed in Table 15, no significant F-values were computed, although significance was approached on two variables. However, the main effects of Sex and Group were determined to be operating independently and the analyses for main effects are presented in Table 16.

Table 16. Analysis of Variance for CMI Scores of Eighth Grade Students (By Sex and By Group)

Variable:	SEX				GROUP			
	Males $\overline{X}$	Females $\overline{X}$	F-Values	P	Career $\overline{X}$	Non-Career $\overline{X}$	F-Value	P
Competence Test								
Self-Appraisal	9.86	11.90	15.86	.00*	11.49	10.53	3.54	.06
Occupational Inf.	11.65	13.38	9.50	.00*	13.05	12.19	2.44	.12
Goal Selection	10.85	10.98	0.07	.79	11.49	10.30	5.81	.02*
Planning	9.76	11.71	12.08	.00*	11.47	10.20	5.20	.02*
Problem Solving	7.96	8.52	1.68	.20	8.54	7.98	1.70	.19
Attitude Scale	30.33	32.08	4.46	.03*	32.14	30.46	4.15	.04*

*p .05

Just as with the sixth grade students, females outscored males on all six of the CMI scores. On four of the six comparisons, significant differences were detected: Self-Appraisal, Occupational Information, Planning, and the Attitude Scale. Only a slight (non-significant) difference was noted on Goal Selection.

When Group Membership was used as the main effect, results were also similar to those obtained with the sixth graders. Career Education students demonstrated higher career maturity levels on all six measures. Significant differences were found on three of the six comparisons: Goal Selection, Planning, and the Attitude Scale. Significance was approached on Self-Appraisal and the differences were relatively large on the remaining two variables.

The analyses for eleventh grade groups are contained in Tables 17 and 18.

The Sex by Group test for interaction produced one significant result. There appeared to be interaction of the classification variables on the Attitude Scale score. A difference significant at the .04 level was detected on this variable. Most of the other F-values were small (under 1.00).

Inspection of the mean scores by subgroups (Table 17) revealed that the significance was due to Career Education males and Non-Career Education females scoring higher than their counterparts.

Table 17. Analysis of Variance for CMI Scores of Eleventh Grade Students (Sex X Group)

Variable:	CAREER ED. Males $\bar{X}$	CAREER ED. Females $\bar{X}$	NON-CAREER ED. Males $\bar{X}$	NON-CAREER ED. Females $\bar{X}$	F-Value	Prob.
Competence Test						
Self-Appraisal	12.94	13.70	11.48	13.81	2.31	.13
Occupational Inf.	15.41	15.82	14.48	16.05	0.96	.67
Goal Selection	12.80	13.64	13.52	13.84	0.46	.50
Planning	12.87	13.60	14.27	14.50	0.42	.53
Problem Solving	10.41	11.03	10.33	11.11	0.03	.86
Attitude Scale	34.45	33.67	32.70	35.03	4.11	.04*

*p .05

Table 18 contains the results of the comparisons when Sex and Group are introduced separately as main effects.

Table 18. Analysis of Variance for CMI Scores of Eleventh Grade Students (By Sex and By Group)

Variable:	SEX Males $\bar{X}$	SEX Females $\bar{X}$	F-Value	P	GROUP Career $\bar{X}$	GROUP Non-Career $\bar{X}$	F-Value	P
Competence Test								
Self-Appraisal	12.39	13.74	8.44	.00*	13.38	12.71	1.91	.17
Occupational Inf.	15.06	15.90	2.39	.12	15.65	15.31	0.34	.57
Goal Selection	13.07	13.71	2.19	.14	13.28	13.69	0.80	.62
Planning	13.40	13.89	0.92	.66	14.28	14.39	0.02	.89
Problem Solving	10.38	11.05	2.61	.10	10.76	10.74	0.00	.96
Attitude Scale	33.80	34.13	0.20	.66	34.01	33.93	0.01	.91

*p .05

Female eleventh graders outscored males on all six comparisons, but only one difference was significant. On Self-Appraisal, females had a significantly higher score. Although the F-values on three other scores were fairly high (over 2.00), none were significant beyond the .05 level.

Career Education students demonstrated higher career maturity levels than Non-Career Education students on Self-Appraisal, Occupational Information, Problem Solving, and Attitude Scale. However, none of the differences was significant. Of the two comparisons where Non-Career Education students scored higher, no significant difference was detected.

Motivation

The JIM Scale was utilized to assess student motivation relative to school. A single motivation score was reported for this instrument. Eighth and eleventh grade students completed the JIM Scale as a part of this data collection phase of the study.

The results of the JIM Scale comparisons for eighth graders are contained in Tables 19 and 20.

Table 19. Analysis of Variance for JIM Scale Scores of Eighth Grade Students (Sex X Group)

Variable:	CAREER ED.		NON-CAREER ED.			
	Males $\overline{X}$	Females $\overline{X}$	Males $\overline{X}$	Females $\overline{X}$	F-Value	Prob.
JIM Scale	103.25	117.04	105.46	106.64	5.86	.02*

*p .05

The test for interaction on the JIM Scale scores for eighth graders showed that there was a significant interaction effect. The F-value of 5.86 was found to be significant at the .02 level. Most of the difference among scores can probably be attributed to the extremely high JIM Score attained by female Career Education students relative to the other three subgroups. Female Career Education students scored 117.04 on the JIM Scale. The other three scores were somewhat similar, with a range from 103.25 to 106.64. Apparently, the combination of being female and in a Career Education program led to a significantly higher level of motivation.

Even though interaction was detected on the comparison of JIM Scores, the main effects were introduced in a separate analysis. The results are presented in Table 20. However, care must be taken in interpreting main effects once interaction has been detected.

Table 20. Analysis of Variance for JIM Scale Scores of Eighth Grade Students (By Sex and By Group)

	SEX				GROUP			
Variable:	Males $\bar{X}$	Females $\bar{X}$	F-Value	P	Career $\bar{X}$	Non-Career $\bar{X}$	F-Value	P
JIM Scale	104.12	111.36	6.31	.01*	110.02	106.21	1.76	.18

*p .05

When Sex was used as the classification variable, a significant F-value was computed. Females had a significantly higher mean score (111.36) than did males (104.12). This significance was, no doubt, due to the extremely high female Career Education scores. Where Group Membership was used as the main effect, no significant difference was found. The Career Education students scored higher (110.02), but the score was not significantly higher than that of Non-Career Education students (106.21).

The same analyses were performed for eleventh graders. Tables 21 and 22 contain the results of the analyses.

Table 21. Analysis of Variance for JIM Scale Scores of Eleventh Grade Students (Sex X Group)

	CAREER ED.		NON-CAREER ED.			
Variable:	Males $\bar{X}$	Females $\bar{X}$	Males $\bar{X}$	Females $\bar{X}$	F-Value	Prob.
JIM Scale	107.29	105.31	106.83	105.11	0.00	.96

JIM scores were very similar for the four subgroups in the test for interaction. An extremely small F-value was computed. In fact, it was rounded off to 0.00 (two decimal places). The classification variables of Sex and Group appeared to be working independently with eleventh grade students.

The main effects analyses were then performed and the results are presented in Table 22.

Table 22. Analysis of Variance for JIM Scale Scores of Eleventh Grade Students (By Sex and By Group)

Variable:	SEX				GROUP			
	Males $\overline{X}$	Females $\overline{X}$	F-Value	P	Career $\overline{X}$	Non-Career $\overline{X}$	F-Value	P
JIM Scale	107.15	105.40	0.23	.64	106.27	105.90	0.01	.92

When Sex was introduced as the main effect, no significant difference was detected. Males slightly outscored females on the JIM Scale but the resulting F-value was not significant at the .05 level. Similarly, when Group Membership was used as the classification variable, an extremely small F-value was produced. The Career Education group had the higher score, but the difference was slight and non-significant.

A recap of the findings presented in this chapter reveals outcomes in favor of the Career Education group. They appeared to score consistently higher across the variables tested, with a number of the scores being significantly higher. The Non-Career Education group recorded only one significantly higher score. When this many analyses are performed, one can expect some error. However, the pattern was consistent and in favor of the Career Education group.

CHAPTER 4

FINDINGS
PROFESSIONAL STAFF COMPONENT

The Professional Staff Component was designed to (1) assess teacher perceptions of the effectiveness of various people, programs, and activities in increasing the knowledge level of staff members concerning Career Education, (2) to identify factors which contribute to the successful development of Career Education, (3) to identify personnel development techniques considered most effective, (4) to identify problems encountered in implementing Career Education, and (5) to assess teacher opinion of the impact of the Career Education program.

To attain the aforementioned purposes a design was utilized which included a questionnaire to ascertain characteristics and problems, and a personal interview to further probe teacher opinions. The latter was used to clarify findings and to verify unanticipated results.

The findings presented in this chapter are divided into two sections. The first section deals with the tabulated findings obtained from a teacher questionnaire and personal interviews. For comparison purposes, reference is frequently made to the original Hazard Career Education Study (Omvig, 1974, pp. 88-126).

The second section focuses on an analysis of the open-end responses obtained on the questionnaire. Open-end responses included (1) rewarding experiences, (2) problems encountered, (3) techniques utilized to overcome problems, and (4) teacher perceptions of the impact of the Career Education program.

Tabulated Responses

The teachers who were active in the Hazard Career Education program were asked to respond to a questionnaire designed to identify characteristics which contribute to the implementation of Career Education, as well as procedures utilized in implementation. They also responded to a list of 26 potential problems in regard to the extent to which they found each to be a barrier for them.

Lists of teacher names from the various local educational agencies were secured from the Regional Career Education Staff. The list was comprised of teachers active in the Career

Education program. The responses of one hundred fifty-two personnel were tabulated. No attempt was made to pressure a teacher to complete the instrument. Responses were sought only from those teachers who had been active in the Career Education program.

Results from the survey of professional personnel were cross tabulated by sex, age of respondent, and level taught. Because of small cell size, these cross tabulations could not be done simultaneously. However, the basic cross tabulations were done to provide more specific information about the professional staff.

The professional personnel were asked to respond to a series of questions in which they rank ordered a number of items for each question. The mean ranking for each item was calculated and, for purposes of presentation, the items were rank ordered from highest to lowest according to how the total group of respondents reacted to the item.

Presented in Table 23 are the mean rankings and rank orders by sex and total group for whom the personnel considered to be most effective in increasing their knowledge and understanding of Career Education.

Table 23. Teacher Ranking of Who Was the Most Effective in Increasing Their Knowledge and Understanding of Career Education by Sex (Individuals Ordered for Total)

Individual(s)	Mean Ranking & Rank Order					
	Males		Females		Total	
	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank
Hazard Region Career Education Staff	1.46	1	1.43	1	1.44	1
System Career Education Coordinator	3.13	2	3.15	2	3.14	2
Teachers in own system	3.84	3	3.96	3	3.91	3
Teachers from other schools	4.03	4	4.03	4	4.03	4
State Department of Education Personnel	4.43	5	4.97	5	4.75	5
University faculty	5.48	6	5.04	6	5.22	6
Out-of-state consultants	5.74	7	5.43	7	5.56	7

As a total group and when considering the sexes independently, the teachers felt that the Regional Career Education Staff was the most effective in helping them gain knowledge about Career Education. Both groups were also consistent in their remaining choices.

Changes in ranking were apparent between the 1974 and 1976 data. In 1976, the teachers indicated increased confidence in teachers from their own school and in state department personnel. University faculty personnel and out-of-state consultants remained at the lower end of the ranking.

Table 24. Teacher Ranking of Who Was the Most Effective in Increasing Their Knowledge and Understanding of Career Education by Teacher Age

	Mean Ranking and Rank Order by Age									
Individual(s)	Under 30		30-39		40-49		Over 50		Total	
	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank
Hazard Region Career Education Staff	1.33	1	1.49	1	1.57	1	1.31	1	1.44	1
System Career Education Coordinator	3.12	3	3.23	2	3.07	2	3.31	2	3.14	2
Teachers in own system	3.09	1	4.06	4	4.26	4	4.07	4	3.91	3
Teachers from other schools	4.00	4	4.04	3	4.10	3	3.97	3	4.03	4
State Department of Education Personnel	4.91	5	4.73	5	4.60	5	4.83	5	4.25	5
University faculty	5.24	6	5.08	6	5.29	7	5.31	7	5.22	6
Out-of-state consultants	6.30	7	5.59	7	5.24	6	5.10	6	5.56	7

The factor of age was also isolated concerning teacher perceptions of who was effective in increasing their knowledge of Career Education. These data are presented in Table 24.

As was the case for sex, the regional staff was rated a high first. The list of individuals was again presented from high to low according to the rank given by the total group. This procedure allows the reader to visualize where the groups differed among themselves and with the total group.

The second choice, System Career Education Coordinator, was also consistent across groups. However, the younger teachers ranked teachers from their own system higher than the Career Education coordinator. State department of education personnel moved up in ranking across all groups. However, the Career Education Staff and other teachers remained as being the most effective in increasing teacher knowledge and understanding of Career Education.

Also considered, when ranking who was most effective in increasing the teachers' knowledge and understanding of Career Education, was the level the teacher primarily taught. The levels were divided into elementary (K-6), junior high (7-9), and high school (10-12). These data are presented in Table 25.

The groups were in total agreement on the first two factors, all ranking the Regional Career Education Staff and their System Career Education Coordinator first and second respectively. There were slight differences in the remaining rankings, with teachers from own system and state department of education personnel moving up in the rankings at the expense of teachers from other systems, university faculty, and out-of-state consultants.

Table 25. Teacher Ranking of Who Was Most Effective in Increasing Their Knowledge and Understanding of Career Education, by Level Primarily Taught

Individual(s)	Mean Ranking and Rank Order by Level Taught							
	K - 6		7 - 9		10 - 12		Total	
	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank
Hazard Region Career Education Staff	1.58	1	1.19	1	1.42	1	1.42	1
System Career Education Coordinator	3.29	1	3.08	2	3.16	2	3.17	2
Teachers in own system	3.88	4	3.73	3	3.88	3	3.90	3
Teachers from other schools	3.79	3	4.62	5	3.99	4	4.03	4
State Department of Education Personnel	4.75	5	4.54	4	4.75	5	4.72	5
University faculty	5.22	6	5.15	6	5.28	6	5.19	6
Out-of-state consultants	5.48	7	5.62	7	5.69	7	5.61	7

All sub-classifications of teachers displayed a high regard for the value of the Career Education staff. The mean ratings were even higher in 1966 than in the 1974 study.

Also of interest was a determination of which activities were the most effective in increasing a teacher's knowledge and understanding of Career Education. Presented in Table 26 are mean rankings and rank orders by sex for this variable.

Males and females were in agreement on the ranking of these activities. Summer workshops again ranked first, and conferences and in-service programs in their own school ranked second and third respectively. Professional meetings and reading professional literature followed, and university courses were last overall.

A fact of importance to be considered was that university courses dealing with Career Education have not been offered, therefore, realistically could not have been ranked as being effective. However, the males ranked university courses higher than reading professional literature.

Table 26. **Teacher Ranking of Which Activities Were the Most Effective in Increasing Their Knowledge and Understanding of Career Education by Sex (Activities Order for Total by 1976 Rankings)**

Activity	Mean Ranking and Rank Order					
	Males		Females		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Summer Workshops	2.25	1	1.91	1	2.05	1
Career Education Conferences (sponsored by Hazard Staff)	2.41	2	2.43	2	2.42	2
In-service program in own school	2.75	3	3.04	3	2.93	3
Professional Meetings	4.07	4	4.18	4	4.14	4
Reading Professional Literature	4.38	6	4.32	5	4.34	5
University Courses	5.31	5	5.15	6	5.21	6

Table 27. **Teacher Ranking of Which Activities Were the Most Effective in Increasing Their Knowledge and Understanding of Career Education, by Teacher Age**

Activity	Mean Ranking and Rank Order by Age									
	Under 30		30-39		40-49		Over 50		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Summer Workshops	2.03	1	1.96	1	2.33	1	1.79	1	2.06	1
Career Education Conferences (sponsored by Hazard Staff)	2.39	2	2.54	2	2.33	1	2.38	2	2.42	2
In-service Program in own school	2.79	3	2.90	3	3.12	3	2.86	3	2.93	3
Professional Meetings	4.36	4	4.08	4	3.98	4	4.21	4	4.14	4
Reading Professional Literature	4.48	5	4.30	5	4.07	5	4.66	5	4.34	5
University Courses	5.00	6	5.24	6	5.26	6	5.34	6	5.21	6

A slight alteration in rank occurred between 1974 and 1976 when considering age groupings of teachers and perceptions of which activities were most effective in increasing their knowledge of Career Education. These data are reported in Table 27. The first three choices remained constant. However, sponsored Career Education conferences rated better in 1976. Minor rank differences between age groups which were evident in 1974 had disappeared.

Teachers teaching in the various levels varied only slightly in their ranking of which activities were the most effective in increasing their knowledge and understanding of Career Education. These data are presented in Table 28.

Table 28. **Teacher Ranking of Which Activities were the Most Effective in Increasing Their Knowledge and Understanding of Career Education, by Level Primarily Taught**

Activity	Mean Ranking and Rank Order by Level Taught							
	K - 6		7 - 9		10 - 12		Total	
	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank
Summer Workshops	1.63	1	1.62	1	2.36	1	2.07	1
Career Education Conferences (sponsored by Hazard Staff)	2.49	2	2.69	3	2.37	2	2.43	2
In-service program in own school	2.90	3	2.50	2	2.99	3	2.89	3
Professional Meetings	4.12	4	4.62	4	4.01	4	4.16	4
Reading Professional Literature	4.43	5	4.65	5	4.25	5	4.35	5
University Courses	5.49	6	5.08	6	5.07	6	5.20	6

Summer workshops, Career Education conferences, and in-service programs in their own schools rank one, two, and three respectively. The junior high school group ranked in-service programs in their own school somewhat higher than the other groups. Other group differences observed in 1974 had again disappeared. The size of the mean rankings indicated that summer workshops, although still ranked number one, had slipped in perceived value and sponsored conferences received higher rankings by the Career Education teachers.

To be effective, the concepts of Career Education must be conveyed to students. The teachers were asked to indicate which activities were most effective in reaching students. Displayed in Table 29 are the means and rankings by teacher sex for this variable.

Table 29. Teacher Ranking of Which Activities Were the Most Effective in Conveying Career Education Concepts to Students, by Sex

Activity	Males		Females		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Teaching Career Education Units	1.46	1	1.55	1	1.52	1
Utilizing Career Education Related Examples or Methods to Supplement Regular Materials	3.10	3	2.84	2	2.94	2
Class Projects	3.03	2	3.24	5	3.16	3
Using Resource People in Class	3.14	4	3.21	4	3.18	4
Field Trips	3.49	5	3.07	3	3.23	5

Mean Ranking and Rank Order by Sex

Both groups of teachers were in total agreement in 1974. However, the 1976 data indicated rather extensive change in teacher opinion.

Integrating Career Education concepts with regular academic material moved from fifth to second in the total ranking. Teaching Career Education units remained first. Another significant shift was observed for field trips. The overall ranking of field trips dropped from second to fifth. However, females ranked field trips third, but placed far less value on class projects than did males. Using resource people in class also dropped in teacher ranking.

When age was isolated as a factor, a somewhat different ranking occurred concerning which methods were most effective with students. Presented in Table 30 are these rankings by age group of teachers.

Integrating Career Education related examples or methods with regular materials shifted to an overall ranking of second and was ranked first by the younger teachers, but fourth by the older group. Class projects, previously ranked fourth for total, moved to third overall. Field trips, previously ranked second, moved to last.

After two years of working in a Career Education program, the teachers apparently changed their opinion of the value of outside resources, as indicated by lower rankings for field trips and using resource people in class.

Table 30. Teacher Ranking of Which Activities Were Most Effective in Conveying Career Education Concepts to Students, by Teacher Age

Activity	Mean Ranking and Rank Order by Age									
	Under 30		30-39		40-49		Over 50		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Teaching Career Education Units	2.97	2	2.29	1	2.37	1	2.64	1	2.53	1
Utilizing Career Education Related Examples or Methods to Supplement Regular Materials	2.79	1	3.08	2	2.80	2	3.07	4	2.94	2
Class Projects	3.00	3	3.23	4	3.32	5	3.00	2	3.16	3
Using Resource People in Class	3.21	5	3.15	3	3.29	4	3.04	3	3.18	4
Field Trips	3.06	4	3.27	5	3.24	3	3.36	5	3.23	5

Presented in Table 31 are teacher rankings of which activities were the most effective in conveying Career Education concepts to students, classified according to the grade level taught by the responding teacher.

Table 31. Teacher Ranking of Which Activities Were Most Effective in Conveying Career Education Concepts to Students, by Level Primarily Taught

Activity	Mean Ranking and Rank Order by Level Taught							
	K - 6		7 - 9		10 - 12		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Teaching Career Education Units	2.91	2	1.92	1	2.55	1	2.55	1
Utilizing Career Education Related Examples or Methods to supplement Regular Materials	3.07	3	3.23	3	2.68	2	2.88	2
Class Projects	3.11	5	3.46	5	3.14	3	3.18	3
Using Resource People in Class	3.09	4	3.19	2	3.18	4	3.19	4
Field Trips	2.85	1	3.23	3	3.50	5	3.24	5

The teachers consistently ranked integrating Career Education related examples and methods with regular materials better than they did in 1974, particularly the high school teachers. Field trips were again ranked first by the elementary teachers, but third by the junior high teachers and fifth by the high school teachers. Other differences by level were found for class projects, with high school teachers ranking them higher and using resource people, with the junior high teachers giving this method a higher ranking. Teaching Career Education Units remained the most favored activity.

One of the recognized methods in Career Education has been the use of resource persons in class, although the teachers ranked it less effective in 1976. Teachers wishing to secure the services of such individuals might wish to know the methods which have been effective for other teachers.

Table 32. Teacher Ranking of the Most Effective Method of Securing Resource Persons for a Class, by Sex

Method	Mean Ranking and Rank Order by Sex					
	Males		Females		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Personal Contact by Teacher	1.90	1	1.76	1	1.81	1
Telephone Contact by Teacher	2.94	2	2.86	2	2.91	2
Personal Contact by Students	3.65	3	3.36	3	3.46	3
Letters Sent by Teacher	4.71	4	4.61	4	4.64	4
Telephone Contact by Students	4.75	5	4.70	5	4.72	5
Letters Sent by Students	5.00	6	5.00	6	5.00	6
Arranged by an Administrator	5.27	7	5.74	7	5.57	7

Presented in Table 32 are the teacher rankings of the most effective methods used in securing resource persons. In 1976, males and females were in total agreement concerning the ranking of the various methods. Personal contact by the teacher was rated far superior to other methods, followed by telephone contact by the teacher and personal contact by the students.

The total ranking placed arrangement by an administrator as last. Male teachers had previously ranked this method fourth.

Table 33. Teacher Ranking of the Most Effective Method of Securing Resource Persons for Class, by Teacher Age

Method	Mean Ranking and Rank Order by Age									
	Under 30		30-39		40-49		Over 50		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Personal Contact by Teacher	1.90	1	1.80	1	1.92	1	1.56	1	1.81	1
Telephone Contact by Teacher	2.74	2	2.75	2	3.00	2	3.24	2	2.91	2
Personal Contact by Students	3.13	3	3.93	3	3.34	3	3.24	2	3.46	3
Letters sent by Teacher	4.61	5	4.36	4	4.71	5	5.08	6	4.64	4
Telephone Contact by Students	4.45	4	4.77	5	5.00	6	4.52	4	4.72	5
Letters sent by Students	5.39	6	5.20	6	4.66	4	4.60	5	5.00	6
Arranged by an Administrator	5.85	7	5.20	6	5.58	7	5.84	7	5.57	7

A slightly different pattern emerged when considering the age of the teacher. These data were presented in Table 33. The older teachers who appeared more willing in 1974 to let an administrator arrange for resource persons now ranked that method last. All age groups preferred personal contact by the teacher, followed by telephone contact by teacher and personal contact by student.

Slight differences in ranking were observed between level taught and the teacher rankings of the most effective method of securing resource persons for a class. These data appear in Table 34.

All groups ranked personal and telephone contacts by the teacher as the superior methods. However, elementary teachers ranked letters by students higher than the other groups. The responses generally followed a consistent pattern.

As might be expected, the elementary group rated telephone contact by student as the poorest method. This was also true in 1974.

Table 34. Teacher Ranking of the Most Effective Method of Securing Resource Persons for a Class, by Level Primarily Taught

Method	K - 6		7 - 9		10 - 12		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Personal Contact by Teacher	2.05	1	1.92	1	1.53	1	1.79	1
Telephone Contact by Teacher	3.39	2	2.60	2	2.67	2	2.89	2
Personal Contact by Students	3.50	3	3.12	3	3.47	3	3.42	3
Letters sent by Teacher	4.59	5	4.88	5	4.60	4	4.65	4
Telephone Contact by Students	4.61	6	4.28	4	4.93	5	4.70	5
Letters Sent by Students	4.32	4	5.16	6	5.58	7	5.05	6
Arranged by an Administrator	5.59	7	5.92	7	5.40	6	5.60	7

Mean Ranking and Rank Order by Level Taught

Teacher ratings of the most effective methods of motivating students appear in Table 35. Male and female teachers were in close agreement by rank order; however, analysis of the size of the mean ranking for selected methods indicated there was differing degrees of preference by sex.

Hands-on class projects received more first place ratings and was ranked as the most effective method. Field trips and teacher enthusiasm also received a number of first place ranks, but averaged to second and third place rankings respectively.

Written reports, career corners, and bulletin boards were not rated as particularly effective by either group. Two shifts occurred in 1976. First, use of resource persons dropped one place. Second, films and filmstrips climbed from ninth to seventh.

Teacher rankings of effective methods of motivating students were also tabulated for various teacher age groups. These data appear in Table 36. Only a few changes from the rank order for total resulted.

The older group of teachers weren't quite as high on use of field trips as the younger teachers and also ranked teacher enthusiasm as a more important factor than did the younger group of teachers. Other rankings conformed quite well to the ranking of the groups as a total body with use of films and filmstrips moving up in each groups' rankings.

Table 35. Teacher Rankings of the Most Effective Method of Motivating Students by Sex

Method	Mean Ranking and Rank Order by Sex					
	Males		Females		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Hands-on Class Projects	3.04	1	2.96	1	2.99	1
Field Trips	3.96	2	3.49	2	3.68	2
Teacher Enthusiasm for Career Education	4.44	3	3.52	3	3.88	3
Resource Persons in Class	4.62	4	4.66	4	4.64	4
Role Playing	5.47	6	4.71	5	5.01	5
Group Work	4.76	5	6.01	6	5.15	6
Films and Filmstrips	6.53	7	6.52	7	6.52	7
Career Corners	6.84	8	6.76	8	6.79	8
Bulletin Boards	7.00	9	7.60	9	7.36	9
Doing Research and Written Reports on Occupations	7.29	10	7.65	10	7.51	10

Table 36. Teacher Ranking of the Most Effective Method of Motivating Students, by Teacher Age

Method	Mean Ranking and Rank Order by Age									
	Under 30		30-39		40-49		Over 50		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Hands-on Class Projects	3.25	1	3.29	1	2.33	1	3.20	1	2.99	1
Field Trips	3.38	2	3.86	2	3.28	2	4.40	3	3.68	2
Teacher Enthusiasm for Career Education	3.91	3	3.93	3	4.13	3	3.40	2	3.88	3
Resource Persons in Class	4.44	4	4.10	4	4.36	4	4.72	4	4.64	4
Role Playing	4.94	5	4.93	5	4.95	5	5.36	5	5.02	5
Group Work	5.34	6	5.60	6	5.54	6	5.56	6	5.15	6
Films and Filmstrips	6.56	7	6.48	7	6.54	7	6.52	7	6.52	7
Career Corners	7.03	8	6.74	8	6.82	8	6.52	7	6.79	8
Bulletin Boards	7.66	10	7.48	9	7.49	9	6.60	9	7.36	9
Doing Research and Written Reports on Occupations	7.41	9	7.62	10	7.54	10	7.40	10	7.51	10

Several differences in teacher tankings were observed when considering level taught and the most effective methods of motivating students. These data appear in Table 37.

Hands-on class projects received the highest overall ranking. Second overall was field trips, followed by teacher enthusiasm and utilizing resource persons in class. Role playing appeared to rank higher in the elementary grades, while research and written reports on occupations rated higher in high school. The value of group work increased as the level increased, while the opposite was true for career corners. The lower the grade, the more effective this method was considered.

Table 37. Teacher Ranking of the Most Effective Method of Motivating Students, by Level Primarily Taught

Method	Mean Ranking and Rank Order by Level Taught: K - 6		7 - 9		10 - 12		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Hands-on Class Projects	2.59	1	3.52	1	3.17	1	3.04	1
Field Trips	3.59	2	3.76	3	3.83	2	3.71	2
Teacher Enthusiasm for Career Education	4.05	3	3.52	2	3.90	3	3.87	3
Resource Persons in Class	5.30	5	4.52	5	4.14	4	4.60	4
Role Playing	4.43	4	4.36	4	5.71	6	5.03	5
Group Work	5.95	7	5.76	6	4.98	5	5.48	6
Films and Filmstrips	6.95	8	6.48	7	6.10	7	6.51	7
Career Corners	5.68	6	6.76	8	7.64	10	6.83	8
Bulletin Boards	7.18	9	7.20	9	7.51	9	7.37	9
Doing Research and Written Reports on Occupations	8.25	10	7.80	10	6.93	8	7.46	10

Any planning for a Career Education program should consider what teachers, who have participated in a program, felt were the most important determiners of program success. These findings are presented in Table 38.

The determiner which again received the highest ranking by all teachers was a good program of in-service education prior to program implementation. Leadership from a Career Education staff ranked second. However, the female teachers tended to place a higher rank on administrative support. The data gathered through personal interview in 1974 and in

1976 confirmed in-service and administrative support as being crucial. The value of the regional staff was clearly recognized at both data collection points.

Needing special facilities ranked last for both groups. The necessity of prepared instructional materials and parental and community support ranked next to last. This was true in 1974 as well as 1976.

Table 38. Teacher Ranking of the Most Important Determiner of Program Success in Career Education, by Sex

Determiner	Mean Ranking and Rank Order by Sex					
	Males		Females		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
In-service Education Prior to Implementation	2.26	1	2.41	1	2.35	1
Leadership from a Source Such as the Regional Career Education Staff	2.41	2	3.07	3	2.80	2
Administrative Support	2.85	3	2.88	2	2.87	3
Parental and Community Support	4.11	4	3.68	4	3.86	4
Prepared Instructional Materials	4.16	5	3.93	5	4.03	5
Special Facilities	5.23	6	5.03	6	5.11	6

When considering the age of the teachers, few differences were observed in their rankings of determiners of program success. Analysis of Table 39 reveals the consistency of the rankings by age group. No item for any age group varied more than one place from its rank for total teacher group.

The need for in-service education prior to program implementation remained number one. Both the older and younger groups viewed administrative support and leadership from a source such as the Regional Career Education Staff as important determiners. The need for special facilities, prepared instructional materials, and parental and community support received relatively low rankings.

The teachers across the various teaching levels were also very consistent in their rankings of the most important determiners of program success in Career Education. These data are presented in Table 40.

Table 39. **Teacher Ranking of the Most Important Determiner of Program Success in Career Education, by Teacher Age**

Determiner	Mean Ranking and Rank Order by Age									
	Under 30		30-39		40-49		Over 50		Total	
	X̄	Rank	X̄	Rank	X̄	Rank	X̄	Rank	X̄	Rank
In-service Education Prior to Implementation	2.21	1	2.32	1	2.62	1	2.18	1	2.35	1
Leadership from a Source Such as the Regional Career Education Staff	3.06	3	2.90	2	2.64	3	2.57	2	2.80	2
Administrative Support	2.35	2	3.08	3	2.60	2	2.93	3	2.87	3
Parental and Community Support	4.09	5	3.56	4	3.98	4	3.93	4	3.86	4
Prepared Instructional Materials	3.52	4	4.20	5	4.07	5	4.25	5	4.03	5
Special Facilities	5.12	6	4.94	6	5.26	6	5.18	6	5.11	6

Table 40. **Teacher Ranking of the Most Important Determiner of Program Success in Career Education, by Level Primarily Taught**

Determiner	Mean Ranking and Rank Order by Level Taught							
	K - 6		7 - 9		10 - 12		Total	
	X̄	Rank	X̄	Rank	X̄	Rank	X̄	Rank
In-service Education Prior to Implementation	2.52	1	2.27	1	2.21	1	2.32	1
Leadership from a Source Such as the Regional Career Education Staff	2.77	2	2.58	2	2.91	3	2.78	2
Administrative Support	2.92	3	2.85	3	2.88	2	2.89	3
Parental and Community Support	3.65	4	4.04	4	3.84	4	3.82	4
Prepared Instructional Materials	3.96	5	4.31	5	4.03	5	4.06	5
Special Facilities	5.29	6	4.96	6	5.10	6	5.16	6

All groups ranked in-service education prior to implementation as the most important factor. Career Education staff leadership and administrative support were also ranked high.

These factors were most frequently mentioned during the personal interviews. The high school teachers ranked administrative support slightly higher than the other two groups.

One feels more comfortable in seeking advice from someone perceived as having more knowledge than others on a subject. In addition, uniformed publics should be made knowledgeable.

The teachers were asked their opinion of how knowledgeable they considered various publics to be on Career Education. These results are presented in Table 41. A list of 11 publics were ordered from the one receiving the highest average rating on a five-point Likert-type scale by the total group of teachers to the one receiving the lowest rating.

The ordering by sex varied little from the ordering for the total group. It was, however, important to consider the overall ordering.

Table 41. Teacher Opinion of How Knowledgeable Various Publics Were About Career Education, by Sex (opinion recorded on a 1, high, to 5, low, scale)

Publics	Mean Ratings and Rank Order by Sex					
	Males		Females		Total	
	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank
Hazard Region Career Education Staff	1.27	1	1.22	1	1.24	1
Summer Workshop Participants	1.45	2	1.43	2	1.44	2
Counselor in Respondent's School	1.69	4	1.66	3	1.67	3
Respondent Herself/Himself	1.67	3	1.69	4	1.69	4
Counselors (as a total group)	1.83	5	1.76	5	1.79	5
Respondent's Building Principal	1.88	6	1.83	6	1.85	6
Administrators (as a total group)	2.02	7	1.93	7	1.96	7
Teachers in Respondent's School	2.09	8	2.16	8	2.13	8
Teachers (as a total group)	2.36	9	2.17	9	2.24	9
Community	3.27	10	3.37	10	3.33	10
Parents	3.35	11	3.39	11	3.37	11

In both 1974 and 1976, the Regional Career Education Staff ranked first and the summer workshop participants ranked second. In 1974, the respondents ranked themselves as third for they, in fact, were the summer workshop participants and the teachers primarily participating in the Career Education program during the school year. However, in 1976, some interesting changes in ordering occurred. Counselors from the respondent's school were raised from seventh to third place on the list of knowledgeable publics, while the respondent's building principal dropped from fourth to sixth. After two additional years in a Career Education program, the teachers rated their own teaching colleagues higher. Since, in 1974, Career Education was new to the teachers, it would be natural for them to assume someone else would know more about it.

Table 42. Teacher Opinion of How Knowledgeable Various Publics Were About Career Education, -by Teacher Age (opinion recorded on a 1, high, to 5, low, scale)

Publics	Mean Rating and Rank Order by Age									
	Under 30		30-39		40-49		Over 50		Total	
	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank
Hazard Region Career Education Staff	1.31	1	1.33	1	1.14	1	1.15	1	1.24	1
Summer Workshop Participants	1.34	2	1.67	2	1.36	2	1.30	2	1.44	2
Counselor in Respondent's School	1.71	3	1.88	4	1.38	3	1.74	4	1.67	3
Respondent Herself/ Himself	1.78	5	1.83	3	1.63	5	1.42	3	1.69	4
Counselors (as a total group)	1.74	4	1.98	6	1.59	4	1.84	6	1.79	5
Respondent's Building Principal	2.06	7	1.90	5	1.68	6	1.75	5	1.85	6
Administrators (as a total group)	1.88	6	2.00	7	1.90	7	2.12	8	1.96	7
Teachers in Respondent's School	2.38	9	2.14	8	2.02	8	1.96	7	1.67	8
Teachers (as a total group)	2.19	8	2.26	9	2.26	9	2.28	9	2.24	9
Community	3.53	11	3.07	10	3.45	11	3.32	10	3.33	10
Parents	3.39	10	3.41	11	3.28	10	3.44	11	3.37	11

The remaining publics remained in relatively the same rank order, with parents and community receiving the lowest teacher ratings concerning their knowledge of Career Education. Since the other publics were all educational personnel, the latter finding was no surprise.

When considering the age of the teacher and who he or she thought to be most knowledgeable about Career Education, a slightly different pattern was revealed. These data appear in Table 42. Only those ratings which differed significantly from the total ratings were discussed.

The Under 30 group didn't rate themselves to be as knowledgeable about Career Education as did the older group. As a group, they ranked themselves fifth. They also ranked the counselor in their school higher than did the older group.

Table 43. Teacher Opinion of How Knowledgeable Various Publics Were About Career Education, by Level Primarily Taught, (opinion recorded on a 1, high, to 5, low, scale)

Publics	Mean Rating and Rank Order by Level Taught						Total	
	K - 6		7 - 9		10 - 12			
	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank
Hazard Region Career Education Staff	1.28	1	1.33	1	1.21	1	1.25	1
Summer Workshop Participants	1.32	2	1.55	2	1.45	2	1.43	2
Counselor in Respondent's School	1.62	3	2.20	6	1.56	3	1.67	3
Respondent Herself/ Himself	1.64	4	1.87	3	1.66	4	1.71	4
Counselors (as a total group)	1.64	4	2.00	4	1.78	6	1.78	5
Respondent's Building Principal	1.98	6	2.24	7	1.69	5	1.87	6
Administrators (as a total group)	2.00	7	2.19	5	1.86	7	1.98	7
Teachers in Respondent's School	2.21	9	2.29	8	2.02	8	2.13	8
Teachers (as a total group)	2.20	8	2.43	9	2.16	9	2.26	9
Community	3.20	11	3.45	11	3.32	10	3.34	10
Parents	3.16	10	3.27	10	3.53	11	3.38	11

As was previously the case, respondents from all age groups rated their counselor higher, from seventh in 1974 to third in 1976, and their principal lower.

The level the teacher taught was also isolated when considering teacher opinion of how knowledgeable various publics were about Career Education. These ratings are presented in Table 43.

All groups still rated the regional staff as being the most knowledgeable and the summer workshop participants next highest. Other ratings were about the same across groups, with only slight variation. The junior high teachers rated their counselors as being less knowledgeable than did the other groups.

The teachers were further asked who they felt possessed the most positive attitude toward Career Education. These data are presented in Table 44. As was the case with knowledge, the Regional Career Education Staff was ranked first, followed by the respondent himself and the workshop participants. Again, counselors moved up and the respondent's principal received a lower rating.

Table 44. Teacher Opinion of How Positive an Attitude Various Publics Had Toward Career Education, by Sex, (opinion recorded on a 1, high, to 5, low, scale)

Publics	Mean Ratings and Rank Order by Sex					
	Males		Females		Total	
	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank
Hazard Region Career Education Staff	1.20	1	1.20	1	1.20	1
Respondent Herself/Himself	1.53	2	1.54	2	1.54	2
Summer Workshop Participants	1.71	3	1.62	3	1.66	3
Counselor in Respondent's School	1.73	4	1.69	4	1.71	4
Counselors (as a total group)	1.91	5	1.80	5	1.85	5
Respondent's Building Principal	2.00	6	1.81	6	1.89	6
Administrators (as a total group)	2.03	7	2.02	7	2.03	7
Teachers in Respondent's School	2.21	8	2.19	8	2.20	8
Teachers (as a total group)	2.34	9	2.41	9	2.38	9
Parents	2.67	11	2.51	10	2.57	10
Community	2.65	10	2.56	11	2.60	11

When controlling for teacher age, few differences in the ratings were observed concerning who the teachers felt possessed the most positive attitude toward Career Education. These ratings appear in Table 45. Only differences from the total ratings were discussed.

Table 45. Teacher Opinion of How Positive an Attitude Various Publics Had Toward Career Education, by Teacher Age (opinion recorded on a 1, high, to 5, low, scale)

	Mean Opinion Rating by Age									
Publics (ordered from most to least positive by total	Under 30		30-39		40-49		Over 50		Total	
	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank
Hazard Region Career Education Staff	1.29	1	1.33	1	1.09	1	1.04	1	1.20	1
Respondent Herself/ Himself	1.65	2	1.83	3	1.30	2	1.32	2	1.54	2
Summer Workshop Participants	1.68	3	1.70	2	1.71	5	1.48	3	1.66	3
Counselor in Respondent's School	1.76	4	1.92	5	1.44	3	1.74	4	1.71	4
Counselors (as a total group)	1.93	5	1.98	6	1.63	4	1.88	6	1.85	5
Respondent's Building Principal	2.19	7	1.85	4	1.71	5	1.84	5	1.89	6
Administrators (as a total group)	2.10	6	1.98	6	1.88	7	2.27	8	2.03	7
Teachers in Respondent's School	2.19	7	2.27	8	2.21	8	2.04	7	2.20	8
Teachers (as a total group)	2.29	9	2.40	9	2.29	9	2.33	9	2.38	9
Parents	2.52	10	2.56	11	2.70	10	2.41	10	2.57	10
Community	2.55	11	2.50	10	2.78	11	2.54	11	2.60	11

The younger teachers rated their building principal lower than did the other groups. In 1974, they had rated their own building principal higher, second only behind the Regional Career Education Staff.

The level taught was also isolated as a factor when considering teacher opinions of the attitude toward Career Education displayed by various publics. These data are presented in Table 46.

Table 46. Teacher Opinion of How Positive an Attitude Various Publics Had Toward Career Education, by Level Taught (opinion recorded on a 1, high, to 5, low, scale)

Publics	Mean Rating and Rank Order by Level Taught							
	K - 6		7 - 9		10 - 12		Total	
	X̄	Rank	X̄	Rank	X̄	Rank	X̄	Rank
Hazard Region Career Education Staff	1.17	1	1.31	1	1.21	1	1.21	1
Respondent Herself/ Himself	1.34	2	1.77	3	1.65	2	1.55	2
Summer Workshop Participants	1.54	3	1.79	4	1.70	4	1.66	3
Counselor in Respondent's School	1.62	4	2.10	6	1.66	3	1.70	4
Counselors (as a total group)	1.80	5	1.95	5	1.88	6	1.85	5
Respondent's Building Principal	1.95	7	1.43	2	1.72	5	1.90	6
Administrators (as a total group)	1.93	6	2.22	7	2.06	7	2.03	7
Teachers in Respondent's School	2.20	8	2.36	8	2.16	8	2.21	8
Teachers (as a total group)	2.38	9	2.52	9	2.34	9	2.38	9
Parents	2.40	10	2.50	10	2.66	11	2.57	10
Community	2.63	11	2.57	11	2.53	10	2.59	11

The teachers from all levels were consistent in rating the Hazard staff and themselves as first and second, with the exception of the junior high teachers. The junior high group rated their building principal and counselor lower than did any of the other groups in 1974. Yet, in 1976, they rated their building principal second only to the Hazard staff. This group also rated their counselor lower than did the other groups.

As was in the case of knowledge, counselors were consistently rated higher and the building principal lower.

Table 47. **Teacher Opinion Concerning the Severity of Various Problems Encountered in Implementing the Career Education Program, by Sex (opinion recorded on a 1, no problem, to 4, much problem, scale)**

Problems	Mean Rating and Rank Order by Sex					
	Males		Females		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Insufficient funds to purchase materials	3.31	1	3.23	1	3.26	1
Insufficient funds for field trips	3.18	2	3.02	3	3.02	2
Insufficient time to plan with other teachers	3.00	3	3.10	2	3.06	3
Insufficient individual planning time	2.71	5	2.90	4	2.82	4
Availability of appropriate Career Education materials for students	2.64	7	2.69	5	2.67	5
Other teachers willing to participate	2.80	4	2.55	6	2.64	6
Other teachers not accepting Career Education	2.67	6	2.54	7	2.59	7
Finding resource people with time to come to school and talk with students	2.63	8	2.42	9	2.50	8
Not having sufficient facilities in which to conduct Career Education activities	2.34	16	2.48	8	2.43	9
Availability of Career Education teacher materials	2.41	12	2.38	11	2.39	10
Organizing field trips	2.40	14	2.39	10	2.39	10
Teachers not being involved in decision-making	2.41	12	2.36	12	2.38	12
Negative opinions of Career Education from other faculty/administration	2.49	11	2.30	15	2.37	13
Class size too large to achieve objectives	2.51	10	2.27	16	2.36	14

Table 47, Continued

Problems	Mean Rating and Rank Order by Sex					
	Males		Females		Total	
	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank
Continuation of the program for next year	2.31	17	2.36	12	2.34	15
Obtaining quality resource people	2.53	9	2.21	18	2.33	16
Availability of school time for speakers and field trips	2.38	15	2.27	16	2.31	17
Not completing Career Education objectives because of a need to complete other important school objectives	2.17	20	2.36	12	2.29	18
Differing student interests and aptitudes	2.19	18	2.20	19	2.20	19
Knowledge of places to schedule field trips	2.15	22	2.19	20	2.18	20
Achieving both Career Education and academic objectives	2.15	22	2.14	21	2.15	21
Availability of sufficient in-service training	2.19	18	2.10	22	2.14	22
Evaluating students' growth in Career Education	2.17	20	2.07	23	2.11	23
Integrating Career Education into the existing curriculum	2.12	24	1.91	24	1.99	24
Being able to interest students in Career Education concepts	2.04	25	1.81	25	1.90	25
Feeling confident in teaching a Career Education unit	1.87	26	1.66	26	1.74	26

One of the major purposes of the study was to ascertain problems which the teachers encountered in implementing Career Education. Presented in Table 47 are teacher ratings as to whether each potential problem listed on the questionnaire was (1) No Problem, (2) Little, (3) Some, or (4) Much Problem. Twenty-six potential problems were listed in the order of severity as rated by the teachers in 1976. The list was originally obtained from interviewing teachers and by reviewing previous research. The teachers were also asked to list the most significant problems they encountered. These open-end responses will be discussed later in this chapter.

The most difficult problem encountered by teachers was a lack of sufficient funds to purchase materials. This was the number one problem listed in 1974 also. Other problems in the top quarter of those listed included insufficient time to plan with other teachers or individually, insufficient funds for field trips, the availability of appropriate Career Education materials for students, and not finding other teachers willing to participate in Career Education.

Areas in which the teachers experienced little difficulty included being able to interest students in Career Education, feeling competent when teaching, evaluating student growth in Career Education, integrating Career Education into the existing curriculum, availability of sufficient in-service training, and achieving both Career Education and academic objectives. They also felt little difficulty in finding places to schedule field trips. Refer to the table for the complete listing, including mean ratings by sex.

Several changes between the 1974 and 1976 findings were observed. The problem of other teachers not accepting Career Education dropped from fifth to seventh and negative opinions of others from ninth to thirteenth. Sufficient in-service training dropped from 13th to 22nd. Organizing field trips became more of a problem, from 16th to tenth. Teachers had previously responded that they felt field trips were not as effective as was the response in 1974.

The severity of potential problems to the implementation of Career Education was also analyzed by teacher age group. A few differences were observed. These data are presented in Table 48.

The age groups conformed individually to the total ratings with a few exceptions. These exceptions were briefly discussed. The table contained a complete listing, with group mean ratings.

Table 48. **Teacher Opinion Concerning the Severity of Various Problems Encountered in Implementing the Career Education Program, by Teacher Age (opinion recorded on a 1, no problem, to 4, much problem, scale)**

Problems (ordered from most to last severe by total)	Mean Rating of Severity by Age									
	Under 30		30-39		40-49		Over 50		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Insufficient funds to purchase materials	3.34	1	3.22	1	3.12	1	3.44	1	3.26	1
Insufficient funds for field trips	3.03	3	3.10	3	3.12	1	3.04	4	3.08	2
Insufficient time to plan with other teachers	3.06	2	3.11	2	2.85	3	3.30	3	3.06	3
Insufficient individual planning time	2.91	4	2.73	5	2.49	8	3.38	2	2.82	4
Availability of appropriate Career Education materials for students	2.76	5	2.76	4	2.36	11	2.89	5	2.67	5
Other teachers willing to participate	2.55	9	2.70	6	2.64	5	2.67	7	2.64	6
Other teachers not accepting Career Education	2.56	8	2.58	7	2.60	6	2.65	8	2.59	7
Finding resource people with time to come to school and talk with students	2.58	7	2.36	15	2.78	4	2.26	21	2.50	8
Not having sufficient facilities in which to conduct Career Education activities	2.67	6	2.48	9	2.17	16	2.44	14	2.43	9
Availability of Career Education teacher materials	2.39	13	2.52	8	2.03	20	2.70	6	2.39	10
Organizing field trips	2.33	14	2.34	16	2.45	9	2.40	13	2.39	10
Teachers not being involved in decision-making	2.27	16	2.44	12	2.32	12	2.52	12	2.38	12
Negative opinions of Career Education from other faculty/administration	2.45	12	2.31	17	2.40	10	2.35	17	2.37	13
Class size too large to achieve objectives	2.53	10	2.47	10	1.98	23	2.58	10	2.36	14

Table 48, Continued

Problems (ordered from most to last severe by total)	Mean Rating of Severity by Age									
	Under 30		30-39		40-49		Over 50		Total	
	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank
Continuation of the program for next year	2.15	21	2.37	14	2.30	13	2.63	9	2.34	15
Obtaining quality resource people	2.48	11	2.18	19	2.50	7	2.15	23	2.33	16
Availability of school time for speakers and field trips	2.28	15	2.40	13	2.15	18	2.42	15	2.31	17
Not completing Career Education objectives because of a need to complete other important school objectives	2.18	18	2.45	11	2.00	22	2.56	22	2.29	18
Differing student interests and aptitudes	2.18	18	2.15	20	2.17	16	2.33	19	2.20	19
Knowledge of places to schedule field trips	2.18	18	2.20	18	2.19	15	2.11	24	2.18	20
Achieving both Career Education and academic objectives	2.21	17	2.12	21	2.02	21	2.31	20	2.15	21
Availability of sufficient in-service training	2.09	22	1.96	24	2.22	14	2.42	15	2.14	22
Evaluating students' growth in Career Education	2.00	24	2.06	22	2.10	19	2.35	17	2.11	23
Integrating Career Education into the existing curriculum	2.03	23	2.04	23	1.93	24	1.96	25	1.99	24
Being able to interest students in Career Education concepts	1.82	26	1.88	25	1.80	25	2.20	22	1.90	25
Feeling confident in teaching a Career Education unit	1.88	25	1.83	26	1.62	26	1.60	26	1.74	26

Insufficient individual planning time appeared to be more of a problem to the older teachers. Also, the older group saw a problem in not having sufficient Career Education teacher materials and in-service education. The older teachers differed from the younger by seeing little problem in terms of needing special Career Education facilities and finding quality resource people. The older teachers also saw continuation of the program as a problem, although not among their top rankings.

Presented in Table 49 are teacher ratings of the severity of various problems encountered in implementing the Career Education program when considering the level taught.

Insufficient funds to purchase materials was rated as the most severe problem by all three groups. Funds for field trips and time to plan with other teachers rank second and third.

The elementary teachers ranked the acceptance of Career Education by other teachers as less of a problem than did the other groups. However, other teachers being willing to participate remained in the upper 25 percent of their problems listed. Availability of school time for speakers was no problem for the elementary, but somewhat of a problem for the other groups. The elementary teachers were, however, concerned about continuation of the program, the junior high somewhat concerned, but the high school not concerned.

High school teachers appeared to have more problems finding resource people with time to come to school, organizing field trips, and evaluating student growth in Career Education.

Junior high teachers saw materials and the need for special facilities as less of a problem. They did, however, see lack of involvement in decision-making as a problem.

None of the groups found it a problem to interest students in Career Education concepts nor in feeling confident when teaching Career Education units. Class size was considered to be more of a problem for the high school teachers, a finding contrary to the 1974 study.

To provide descriptive information concerning program operation, the teachers were asked how many field trips they took and how many resource persons visited their class during the past school year. These data were presented for sex, for teacher age, and for level taught.

Table 49. **Teacher Opinion Concerning the Severity of Various Problems Encountered in Implementing the Career Education Program, by Level Taught (opinion recorded on a 1, no problem, to 4, much problem, scale)**

Problems	Mean Rating and Rank Order by Level Taught							
	K - 6		7 - 9		10 - 12		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Insufficient funds to purchase materials	3.23	1	3.31	1	3.23	1	3.24	1
Insufficient funds for field trips	3.00	3	3.04	4	3.09	2	3.07	2
Insufficient time to plan with other teachers	3.04	2	3.20	2	3.00	3	3.06	3
Insufficient individual planning time	2.91	4	3.15	3	2.65	5	2.81	4
Availability of appropriate Career Education materials for students	2.79	5	2.58	8	2.73	4	2.68	5
Other teachers willing to participate	2.71	6	2.73	5	2.58	6	2.63	6
Other teachers not accepting Career Education	2.29	14	2.63	7	2.48	9	2.57	7
Finding resource people with time to come to school and talk with students	2.40	11	2.46	10	2.54	7	2.50	8
Not having sufficient facilities in which to conduct Career Education activities	2.56	7	2.35	15	2.48	9	2.44	9
Availability of Career Education teacher materials	2.46	8	2.23	17	2.42	14	2.38	10
Organizing field trips	2.26	15	2.54	9	2.48	9	2.37	10
Teachers not being involved in decision-making	2.19	17	2.69	6	2.38	15	2.37	12
Negative opinions of Career Education from other faculty/ administration	2.32	13	2.46	10	2.38	15	2.36	13
Class size too large to achieve objectives	2.41	10	2.12	20	2.49	8	2.35	14

Table 49, Continued

Problems	Mean Rating and Rank Order by Level Taught							
	K - 6		7 - 9		10 - 12		Total	
	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank
Continuation of the program for next year	2.46	8	2.42	13	2.23	23	2.32	15
Obtaining quality resource people	2.33	12	2.41	14	2.28	21	2.33	16
Availability of school time for speakers and field trips	2.10	19	2.46	10	2.43	12	2.31	17
Not completing Career Education objectives because of a need to complete other important school objectives	2.21	16	2.31	16	2.29	20	2.26	18
Differing student interests and aptitudes	2.04	20	2.70	18	2.38	15	2.20	19
Knowledge of places to schedule field trips	1.98	22	2.12	20	2.33	19	2.17	20
Achieving both Career Education and academic objectives	2.04	20	2.00	22	2.34	18	2.15	21
Availability of sufficient in-service training	2.19	17	2.16	19	2.05	25	2.11	22
Evaluating students' growth in Career Education	1.79	24	1.96	24	2.41	13	2.11	23
Integrating Career Education into the existing curriculum	1.89	23	2.00	22	2.11	24	1.99	24
Being able to interest students in Career Education concepts	1.57	26	1.76	25	2.25	22	1.91	25
Feeling confident in teaching a Career Education unit	1.65	25	1.76	25	1.88	26	1.75	26

Presented in Table 50 are the mean number of field trips and resource persons used, by teacher sex. Both groups took about the same number of field trips, 2.87 and 2.48 respectively. The female teachers utilized a few more resource persons. The males averaged the use of 2.47 resource persons while the females averaged 3.44 resource persons per class. Both sets of figures are lower than the 1974 figures.

Teacher age was isolated as a variable when considering the number of field trips and resource persons. These data appear in Table 51. As a group, the older teachers again took more field trips. Earlier, it was stated they perceived little problem in knowing where to go or organizing a field trip. This, no doubt, would be due to their longer tenure in the community. They also utilized more resource persons. The younger age group ranked second in number used.

When considering level taught (Table 52) a different pattern was observed. The elementary teachers took fewer field trips. In 1974, they took the most. In 1976, the high school teachers took more field trips. However, the elementary teachers utilized the most resource persons, 4.09, and the high school the fewest, 2.71.

Table 50. Number of Field Trips and Resource Persons, by Teacher Sex

Activity	Mean Number by Sex		
	Males	Females	Total
Field Trips	2.87	2.48	2.62
Resource Persons	2.97	3.44	3.28

Table 51. Number of Field Trips and Resource Persons, by Teacher Age

Activity	Mean Number by Teacher Age				
	Under 30	30-39	40-49	Over 50	Total
Field Trips	2.50	2.62	2.39	3.06	2.62
Resource Persons	3.65	2.39	3.57	3.74	3.28

Table 52. Number of Field Trips and Resource Persons, by Level Taught

Activity	Mean Number by Level Taught			
	K - 6	7 - 9	10 - 12	Total
Field Trips	2.19	2.30	3.27	2.62
Resource Persons	4.09	3.05	2.71	3.31

Involvement of parents in Career Education has been stated as a desirable practice. The teachers were asked whether or not they did this. The results are presented in Table 53. A total of 75 percent of the respondents indicated that they had involved parents. Females and younger teachers involved parents to a somewhat greater extent. However, the real differences in involvement occurred when considering the level taught. Ninety-four percent of the elementary teachers had involved parents, but only 63 percent of the high school teachers had. Junior high teachers were above the average, with 85 percent indicating parental involvement.

Table 53. Involvement of Parents in Career Education by Sex, Age, and Level Taught

Teacher Classification	Involvement					
	Yes		No		Total	
	No.	%	No.	%	No.	%
Sex						
Male	40	70	17	30	57	100
Female	71	78	20	22	91	100
Age						
Under 30	22	71	9	29	31	100
30-39	35	74	12	26	47	100
40-49	32	78	9	22	41	100
Over 50	22	76	7	24	29	100
Level						
K - 6	44	94	3	6	47	100
7 - 9	22	85	4	15	26	100
10 - 12	40	63	24	37	64	100
Total Group	111	75	37	25	148	100

Teachers were asked their opinion of what would happen in their school when funding terminated and the Regional Career Education Staff was gone. These results, classified by sex, are presented in Table 54. Fifty and three-tenths percent responded that Career Education would continue at a reduced level. Only four percent felt that it would stop. An additional 26.4 percent indicated that it would continue at a low level by a few teachers. Women were somewhat more optimistic about the future of Career Education.

When considering teacher responses to the future of Career Education in their school by teacher age, similarly positive replies were recorded. The majority of teachers felt that Career Education would survive, but at a reduced level. These results are presented in Table 55.

Table 54. Teacher Opinion of the Future of Career Education in Their School When Project Funding Ends and a Regional Staff is No Longer Available, by Sex

Result	Frequency of Response by Sex					
	Male		Female		Total	
	No.	%	No.	%	No.	%
Continue Strongly	0	0.0	7	7.7	7	4.6
Stop	3	5.0	1	1.1	4	2.6
Continue at a Reduced Level	32	53.3	44	48.4	76	50.3
Gradually Decline and Finally Disappear	13	21.7	15	16.5	28	18.5
Continue at a Low Level by a Few Teachers	12	20.0	24	26.4	36	23.8
Total	60	100.0	91	100.1	151	99.8

Table 55. Teacher Opinion of the Future of Career Education in Their School When Project Funding Ends and a Regional Staff is No Longer Available, by Teacher Age

Result	Frequency of Response by Age									
	Under 30		30-39		40-49		Over 50		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Continue Strongly	3	9.4	1	2.0	2	4.8	1	3.6	7	4.6
Stop	0	0.0	3	6.1	1	2.4	0	0.0	4	2.6
Continue at a Reduced Level	13	40.6	25	51.0	25	59.5	13	46.4	76	50.3
Gradually Decline and Finally Disappear	7	21.9	9	18.4	6	14.3	6	21.4	28	18.5
Continue at a Low Level by a Few Teachers	9	28.1	11	22.4	8	19.0	8	28.6	36	23.8
Total	32	100.0	49	99.9	42	100.0	28	100.0	151	100.0

When considering level taught and teacher responses to the future of Career Education in their school (Table 56) junior high teachers and high school teachers seemed a bit more optimistic, although no great differences existed. The majority of teachers from each level felt that it would continue at a reduced level and by a few teachers.

Teachers were also asked their opinion of the future of Career Education in the total region. These data are presented in Table 57, by teacher sex. Again, the majority of the teachers felt that Career Education would continue at a reduced level. Few felt it would continue strongly or stop.

Table 56. Teacher Opinion of the Future of Career Education in Their School When Project Funding Ends and a Regional Staff is No Longer Available, by Level Taught

Result	K - 6 No.	K - 6 %	7 - 9 No.	7 - 9 %	10 - 12 No.	10 - 12 %	Total No.	Total %
Continue Strongly	1	2.1	0	0.0	5	7.7	6	4.3
Stop	0	0.0	0	0.0	4	6.2	4	2.9
Continue at a Reduced Level	22	45.8	14	53.8	33	50.8	69	49.6
Gradually Decline and Finally Disappear	10	20.8	3	11.5	13	20.0	26	18.7
Continue at a Low Level by a Few Teachers	15	31.3	9	34.6	10	15.4	34	24.5
Total	48	100.0	26	99.9	65	100.1	139	100.0

Frequency of Response by Level Taught

Table 57. Teacher Opinion of the Future of Career Education in the Total Region When Project Funding Ends and a Regional Staff is No Longer Available, by Sex

Result	Male No.	Male %	Female No.	Female %	Total No.	Total %
Continue Strongly	0	0.0	2	2.2	2	1.4
Stop	2	3.5	1	1.1	3	2.1
Continue at a Reduced Level	34	59.6	43	48.3	77	52.7
Gradually Decline and Finally Disappear	10	17.5	12	13.5	22	15.1
Continue at a Low Level by a Few Teachers	11	19.3	31	34.8	42	28.8
Total	57	99.9	89	99.9	146	100.1

Frequency of Response by Sex

Presented in Table 58 are the teacher opinions of the future of Career Education in Region XII by teacher age. Continue at a reduced level was again the most chosen response. The 40-49 year old age group displayed the most confidence in the survival of Career Education, with only a total of 7.5 percent responding that it would finally disappear or stop. Continuation at some level was the response of approximately 80 percent of the respondents.

Table 58. Teacher Opinion of the Future of Career Education in the Total Region When Project Funding Ends and a Regional Staff is No Longer Available, by Teacher Age

Result	Frequency of Response by Age									
	Under 30		30-39		40-49		Over 50		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Continue Strongly	0	0.0	0	0.0	1	2.5	1	3.7	2	1.4
Stop	0	0.0	2	4.3	1	2.5	0	0.0	3	2.1
Continue at a Reduced Level	14	43.8	23	48.9	26	65.0	14	51.9	77	52.7
Gradually Decline and Finally Disappear	8	25.0	8	17.0	2	5.0	4	14.8	22	15.1
Continue at a Low Level by a Few Teachers	10	31.3	14	29.8	10	25.0	8	29.6	42	28.8
Total	32	100.1	47	100.0	40	100.0	27	100.0	146	100.1

Presented in Table 59 are teacher opinions of the future of Career Education in the region when considering the level taught by the respondent. The elementary and junior high teachers responded favorably in terms of Career Education continuing at a reduced level by at least some teachers.

Table 59. Teacher Opinion of the Future of Career Education in the Total Region When Project Funding Ends and a Regional Staff is No Longer Available, by Level Taught

Result	Frequency of Response by Level Taught							
	K - 6		7 - 9		10 - 12		Total	
	No.	%	No.	%	No.	%	No.	%
Continue Strongly	0	0.0	0	0.0	2	3.2	2	1.5
Stop	0	0.0	0	0.0	3	4.8	3	2.2
Continue at a Reduced Level	26	55.3	13	50.0	31	50.0	70	51.9
Gradually Decline and Finally Disappear	6	12.8	3	11.5	13	21.0	22	16.3
Continue at a Low Level by a Few Teachers	15	31.9	10	38.5	13	21.0	38	28.1
Total	47	100.0	26	100.0	62	100.0	135	100.0

Teachers were further asked their opinion of the impact that the Career Education program had on their school and on education in the total region. They responded to a five-point rating scale ranging from: (1) "No Impact" to (5) "Much Positive Impact." The mean results are presented in Table 60. Consistently high ratings were given by the teachers both for regional impact and local system impact. No great differences were apparent between the responses of males and females; both groups were of the opinion that Career Education has had a significantly positive impact on education.

Table 60. Teacher Opinion of the Impact of the Regional Career Education Program by Sex

Impact	Mean Rating by Sex		
	Male	Female	Total
In Respondent's School	4.32	4.44	4.39
In Total Region	4.46	4.49	4.48

When considering teacher opinion of the impact of Career Education by teacher age (Table 61) similar results were observed. All age groups rated the program as having a positive impact. Only the 30-39 year old age group gave a mean rating of less than four. They rated the impact in their own school slightly lower than did the other groups.

Table 61. Teacher Opinion of the Impact of the Regional Career Education Program by Age

Impact	Mean Rating by Age				
	Under 30	30-39	40-49	Over 50	Total
In Respondent's School	4.45	3.33	4.51	4.24	4.39
In Total Region	4.37	4.48	4.61	4.44	4.48

Teacher opinion of the impact of the Career Education program was also calculated and categorized by level taught (Table 62). Again, consistently high ratings were observed. Teachers from all three levels were of the opinion that the Career Education program had a high positive impact on education.

Table 62. Teacher Opinion of the Impact of the Regional Career Education Program by Level Taught

Impact	Mean Rating by Level Taught			
	K - 6	7 - 9	10 - 12	Total
In Respondent's School	4.28	4.56	4.40	4.39
In Total Region	4.43	4.60	4.45	4.48

Open-End Questions

In addition to the questionnaire items discussed above, the teachers were asked to respond to four open-end questions: (1) "What was the most rewarding experience you encountered in working with your students and Career Education?"; (2) "Please name two of the most significant problems you encountered in implementing Career Education."; (3) "What techniques or procedures did you use to overcome each of the above problems?"; and (4) "How would you rate the impact of Career Education in your school?"

The responses to question one could be conveniently discussed in narrative form when the responses were grouped into seven areas. Analyses yielded seven basic responses which have been categorized as follows (from the most to the least frequently mentioned):

1. Student enthusiasm, enjoyment, and interest
2. Class activities
3. Increased academic performance and relevance
4. Increased career awareness and performance
5. Completed student projects
6. Progress of slow learners and underprivileged students
7. Community cooperation

While some of the areas could be described as being more teacher or administration oriented – e.g., number 2, class activities, and number 7, community cooperation – the responses remained essentially student-oriented, with the focus of the teachers' visions of the rewards of their Career Education programs being on increased and improved student enthusiasm, interest, and performance. Further study of each of these seven areas revealed the significance of Career Education to a student and a school system, whether the student be a fast learner, a slow learner, or the "average" student, and whether or not the school systems have ample Career Education resources at hand.

Any overt change in student reaction to the classroom would be immediately noticed by a teacher, because the teacher's classroom viability is founded on the students' enthusiasm and interest in the class; therefore, the fact that student enthusiasm, enjoyment, and interest was the single most frequently given response speaks well for Career Education. A close look at the responses which make up this group gives educators special insight into the lifebeat of Career Education. The responses continually focused on the particular, tangible, and concrete nature of Career Education, with the teachers mentioning how "students enjoyed drawing floor plans" and how observation of floor tile being laid in the gymnasium was woven into math class to the students' pleasure. Perhaps, however, the most significant response came from the teacher who told how "the students really got involved in a unit on coal mining."

Because coal mining exists as an everyday aspect of the students' and teachers' lives, its ability to serve as a vital resource in the classroom can be easily overlooked, but the importance of its capacity to so function was discovered in a Career Education unit. While children know what their father's or mother's job title is – e.g., he or she is a milkperson; he or she is a factory worker – they do not know what he or she does nor the significance or complexity of the job. This teacher had rediscovered that students want to deal with particulars, with concrete and tangible facts and things, with that which they are familiar. By so doing, student interest levels can be raised and education can once again become "fun," as one teacher described her most rewarding Career Education experience. Certainly, the fact that teacher after teacher described his or her most rewarding Career Education experience as being the sight of students becoming "more interested and more highly motivated" and "growing and developing" because of Career Education and the Career Education units cannot be overlooked – particularly when the second most frequently given area of response fell under the category of class activities.

As stated above, class activities would seem to be a teacher-oriented response, as any teacher is pleased to find and have available new and exciting resources, but the teachers whose responses fell into this group curiously and quite uniformly angled their comments from the perspective of the student interest, enthusiasm, and motivation resulting from these activities. The teachers most often listed resource persons, field trips, interviews, and role playing as the activities which constituted their most rewarding Career Education experience. Once again, the responses took a curious and pointed concrete posture, with one teacher detailing the "marriage counselor who answered questions on marriage" and who made the teacher realize her students "were giving this (marriage) serious thought," and "the parents of an elementary student who brought a goat to school, where he fed, washed, and milked the goat, and allowed over 100 first graders to test the goat's milk." The insight, enjoyment, and real learning which takes place in activities like these were perhaps best articulated by one teacher's statement of her most rewarding Career Education experience: "Seeing children's eyes light up when involved in Career Education activities: hand-on experiences, field trips, role playing, etc." However, the validity of these experiences must be questioned in a day when mathematical and verbal abilities are dissipating rapidly, unless there is a positive relationship between this increased interest and enthusiasm and this improvement in resources and a student's academic performance in the more or less traditional parameters of school.

The fact that the third most often cited area was one of increased academic performance and relevance seems to offer an adequate answer to the question raised above. The teachers felt that Career Education established a relevance to the classroom that had been lost, and that because the students can see how academic subjects will be utilized later in life they demonstrated a greater eagerness and an increased inquiry into the world of academia. Teacher after teacher referred to "the increased interest and attendance," to the fact that the students were now "given reasons for going to school and for setting goals." Their concern for school seemed to have resulted oftentimes in an improved performance level by the students. One teacher said her most rewarding experience resulted from the students' "improvement in grades and their changed attitude toward work," and another teacher saw this year as being "the most rewarding in all her years of teaching." She said, "the children were happy, absentees were at an all time low, and achievement at the end of the year was higher than all my teaching years." This improvement in the students' academic performance did not, however, stunt or preclude their growth and development in the areas of self-confidence and self-concept, that are intrinsic to the career awareness that should result from a Career Education program.

The next area, increased career awareness and interest, holds responses from several teachers who gained a sense of reward and accomplishment from the fact that students learned about a wide variety of available careers of which they had not previously been aware. These teachers sensed the importance of their newly acquired knowledge to the students' abilities to make occupational and academic decisions in the future. Many teachers saw the coalescence of career and academic knowledge as a catalyst for the development of a strong feeling of importance in each student. One Hazard teacher saw the relationship between this early awareness of careers and a more realistic student attraction for jobs that matched their abilities and potential: he saw what he called "evidence of growth" when students "picked jobs that matched their potentials and desires with careers."

Many teachers found their most rewarding experience in a fifth area, in a project which the students completed, because they recognized the personal satisfaction intrinsic to the completion of any complex project. Several projects were mentioned: one class constructed a radio big enough in which to stand, and broadcasted a program for the monthly teacher's meeting; another class produced a school paper; one class set up a grocery store; and another class produced their own play. These projects actively placed the students within career settings and reflected whatever abilities a student did or did not have for such a career. One teacher illustrated how the students reacted to these projects when she related, "We did a role-playing experience in a restaurant. Even the next year, the students talked about it on their own and could even remember their rules." The teachers also felt that slow learners and the underprivileged students benefitted.

Area six, progress of slow learners and underprivileged students, combines with several statements given above to demonstrate the universality of Career Education and to support the arguments of educators for more concrete and tangible activities in the classroom. However, these two facts must not shadow the fact that several teachers saw Career Education as an approach which resulted in students achieving success who had never before been successful in school. One teacher commented, "It is a thrill to see the one who has never been successful in anything be able to do something." These "somethings" were many of the projects and activities mentioned above – projects and activities which grow from a fusion of resources, awareness, and abilities. One teacher related how she taught a unit on state parks, stressing manners and appropriate park behavior. In concluding the unit, she took 60 underprivileged children to a state park for lunch. She concluded, "They were just beautiful; boys seated girls, used good manners, and cleared the lunch site." Another teacher told how "a student (reading below average) became very interested in radio announcers after finishing our unit. He started extra reading and through this interest improved academically." The insight offered by the responses grouped in area six parallel nicely the "normalization" movement going on in special education at this time, particularly when the thrust of the movement is toward jobs for exceptional people. Obviously, however, Career Education of any kind and/or any level cannot succeed without community support, and the respondents' comments in the area of community operation suggested a successful program.

Several teachers expressed their most rewarding experience in terms of community cooperation. Without a responsive community, Career Education cannot offer the student or the teacher improved and expanded activities and resources; the teachers and administrators within one school and within several schools must work together to provide information services and to create viable Career Education programs. Two teachers succinctly stated the significance of community cooperation in relating their most rewarding experiences: one said her most rewarding Career Education experience was to "see teachers, supervisors, and administrators from all disciplines come together and work cooperatively for the common good"; and another said, "to work with the Career Education staff and outside resource people and see how they tried to help our students learn about careers was very gratifying and much appreciated." These teachers realized the necessity of common goals.

Question two, "Please name two of the most significant problems you encountered in implementing Career Education," yielded ten basic problem areas which have been categorized as follows (from most to least frequently mentioned):

1. Time
2. Materials and facilities
3. Faculty members and administration
4. Field trips
5. Funds
6. Student interest
7. Community interest
8. Resistance to change
9. Integration of Career Education into the classroom curriculum
10. Resource persons

Curiously, several of these problems seemed to contradict the teacher's rewarding experiences discussed just above – e.g., student interest was the most often mentioned valuable experience, while at the same time seemingly serving as a major problem for teachers, although ranking sixth of ten problem areas. Only a further study of these problems can answer some of the questions raised by such a contrast.

The first and most frequently given response was concerned with time. Approximately one-third of the responses listed time as a problem without being more specific than "lack of time," "time – six classes a day," and "takes a lot of extra time which I do not have to spend." Approximately one-third of the responses specified a lack of individual and group planning time. Career Education teachers realized readily the time necessary to implement new programs and new ideas into the classroom without deferring any academic emphasis. One harried teacher incisively stated, "Time to plan, prepare, and execute, that causes all my problems." And, approximately one-third of the respondents identified a lack of teaching time. Too often the teachers found that the Career Education units were too long to work into a regular day, that the time needed to build the model grocery or radio station took away hours of needed academic class time, and that the necessity of field trips and speakers took "too much time." These teachers feared "neglecting the valuable aspects of the academic objectives." It seemed many of the teachers feared "leaving too many things undone," that they "needed time to follow through on a project," and that they needed more time "to do all that seemed desirable." In other words, much of this most frequently cited problem grew from the teachers' desire to do as much as humanly possible in the classroom with the time constraints placed upon them.

Certainly the second problem area, materials and facilities, suggested a problem behind the problem to be one of innate limitation. Teacher after teacher listed the problems they had obtaining materials: there was a prevading lack of good audio-visual equipment, of sufficient classroom space, of funds, of complementary community resources in the smaller communities, and of "enough materials related to any career cluster." Because Career Education is oriented toward hands-on experiences and the particular concrete examples which come from such things as role playing and model building, the scarcity of supplies and materials and the sparsity of classroom space "for working on or for displaying a model," this problem area must also be given priority. The solution probably exists inextricably tied to the third problem area, faculty members and administrators.

Many teachers voiced a third problem area, faculty members and administrators. These teachers felt that fellow faculty members, the school administrators, and the Regional Career Education Staff must provide the moral support needed in helping them overcome their problem areas. Obviously, problems like time and materials and supplies cannot be solved by the individual teacher alone, and any initiative to confront these problems will dissipate rapidly if principals demonstrate a "lack of interest" or constantly "stress adherence to routine, to getting things done on time." The old despair of "why fight city hall" seemed to characterize the teachers' responses in this area, particularly when the school counselors, the Regional Career Education Staff, and the fellow teachers mirror the same indifference. Eventually, the students will become aware of and will reflect this same apathy.

Many teachers listed field trips as a major problem. Once again this problem seemed to result from too many burdens being placed on the individual teacher. These teachers felt field trips carried "too much responsibility," that field trips created transportation difficulties; that field trips took "too much time," both scheduling and visiting time; that their location presented a "lack of suitable places for field trips," and that they needed "protection in case of injury on a field trip." Obviously, these concerns were logical results of the problems mentioned above, as well as the fifth problem area, funds.

Several teachers discussed funding difficulties separately, even though funds exist as a problem inherent in the time problem, where teachers would likely not begrudge the extra time needed if they were compensated for this time; in the materials and facilities problem, where more money could easily relieve this problem; in the faculty members and administrators problem, where more staff and staff for Career Education would not be overtaxed and thus not be apathetic, and in field trips, where money could provide transportation, insurance, and entrance into many sites. Lack of funds remained a major problem for Career Education as for all education.

The sixth problem area, student interest, was somewhat surprising in that this same area served as the area for the most frequently mentioned rewarding experience. However, the apathy and internal discontent implicit in the problems suggested above allow and presuppose the presence of a problem with student interest. Several of the teachers found that they could not "use all the students who wanted to be involved" (product of large classroom mentioned above), that "many students already had career goals so why subject them to a unit on banking" (product of teacher needing improved techniques in implementing Career Education), or that "some students had already had too many units on Career Education and were tired of it for awhile" (product of a a lack of internal coordination within a school system). In other words, this problem area grew not from the students as the rewarding experience did, this problem sprang from difficulties within the program itself which the students gradually absorbed and reflected. Thus, no real contradiction probably existed. Perhaps this possibility can be seen more easily when one recalls that community interest was the next most frequently mentioned problem.

Several teachers mentioned a lack of community interest. They had difficulty getting help from parents as well as local merchants. If neither parents nor the merchants visited expressed enthusiasm over the ideas, why should the students become excited? One teacher said his greatest difficulty was "getting people to take the time to talk honestly to the students." This kind of attitude by both parents and townspeople likely resulted from a natural resistance to change, or commitment to get involved.

An eighth problem area, resistance to change, is closely related to both area three, where teachers and administration indifference springs from a resistance to change, and area seven, community interest, where any suggestions of a new approach often resulted in the "well, it was good enough for us when we were young; it should be good for kids today." Several teachers also referred to the presence of "too many academic hangups" and the need to break "the rigid textbook syndrome" and the "rigid classroom hour-to-hour pattern of years." These steps are all an integral part of the implementation of a Career Education program.

A few teachers saw their biggest problem as the integration of Career Education into the classroom curriculum because of "inflexible scheduling" and an inability to "fuse subject matter and Career Education concepts." In other words, these teachers were once again reflecting some of the problems mentioned above: the integration of Career Education into the curriculum becomes tedious and laborious when the teacher constantly has nagging problems. Some compromise must be reached.

The tenth and final problem area is resource persons. These teachers had some difficulty with availability, cooperation, and calcellations of resource persons. These were obviously frustrating kinds of problems, particularly when resource persons were necessary to a viable Career Education program.

In closing the narrative on this question, mention should be made of the fact that some five teachers responded by saying that they had no problems.

When asked in question three how they overcame these problems or how they could overcome these problems, the teachers had many interesting, exciting, and innovative responses.

In dealing with the problem of time, the responses fell into three main areas: 1) schedule improvement; 2) advance planning; and, 3) work at home. In reference to schedule improvement, the teachers suggested and utilized a planning period, preferably "one in which all the teachers together in Career Education might meet." One teacher suggested the possibility of letting "3rd, 4th, and 5th grades work on one career unit, while 1st, 2nd, and 3rd grades worked on another." Another teacher told how she "used two class periods for hands-on experiences and three class periods for subject matter." The general thrust of every solution was one of blending or fusing the traditional schedule with Career Education goals and let this hybrid grow from careful and calculated planning.

From that stated above, the teachers surveyed closely associated schedule improvement with advance planning, and several teachers spoke specifically about advance planning. These teachers saw that without early planning, they would be unable to secure the necessary materials and that with foresight many of the materials could be used by other teachers. One teacher mentioned a summer workshop where he said, "we wrote many units, prepared a handbook and revised several units which were to be made available to other teachers." These teachers suggested how advance planning enhanced teamwork and allowed them to benefit from the insight of others.

Of course neither of these solutions may preclude working at home, which several teachers listed as a solution to their time problem; however, improved scheduling and advanced planning could cut down on the amount of extra time a teacher needs to spend at home on tomorrow's lesson.

The problems the teachers experienced with materials and facilities were solved by a variety of methods. Some classrooms "improvised and constructed their own materials" and some "worked with whatever materials they could find." Other classrooms "shared books within the class" and "alternated the use of the books between classes." This doubling-up process made the materials more pervasive and resulted from the careful planning suggested above. Several teachers worked with the University of Kentucky Materials Centers, the Regional staff, and local resource persons in order to use their available materials most creatively. One teacher also said she "provided her own transportation for field trips," and another said he wrote "to companies for free materials." All of these solutions can be enhanced with an alert and active administration and faculty. Several teachers offered suggestions as to how one is created.

Solutions for the problem area of faculty members and administration radiates from the concept that teachers must educate their co-workers to Career Education concept. This education might take place via inservice training sessions, workshops, and/or group meetings for all faculty and administration members on a school, school system, or regional level, or it might evolve out of an individual teacher's enthusiasm and faith in Career Education and permeate a system slowly and surely. One teacher related how she convinced a skeptical team member because of a successful program. Whether the osmotic effect or the administrative dictate characterizes the process, teacher after teacher expressed a feeling that all teachers and administrators must be involved and must work together. As will be seen later, this idea of total involvement must also include the community as well.

In respect to a fourth problem area, field trips, the teachers spoke mainly in terms of funds, the fifth problem area. As stated above, funds seemed to be the solution to so many of the problems. With proper or better funding, transportation and the purchase of fuel could be obtained for field trips. Likewise, proper insurance could be bought. However, without abundant funds, the teachers suggest that field trips be planned so that they were within walking distance of the school and that they take advantage of the local communities' resources – e.g., the smallest grocery offers a resource for retail sales, wholesale sales, cashier, clerk, etc. Films also serve as a viable substitute for field trips.

In speaking directly to the funding problem, the teachers suggested several available sources of money: the regional office; the board of education; parents; Parent-Teacher Association; and class fund raising projects. While regional offices and boards of education seem obvious sources of funding, many teachers overlook the possibility of parents contributing to a fund that would help improve their children's education or the practice of parents paying a fee for the Career Education activities just like they pay a lab fee for science classes and a supply fee for shop classes. Likewise, the individual classes can have fund raising projects – e.g., if one taught a career unit on carpentry and the class made a bookcase or two bookcases (from donated wood), these could be sold profitably and the money put back into the course. Fund raising projects also serve as an excellent way to improve class morale and motivate students.

In dealing with the problem of student interest, the teachers uniformly suggested the need for a more creative and exciting classroom atmosphere. The reasoning seemed to be that if the students displayed enthusiasm, they would stimulate the school and community. Thus, several teachers told how they used "resource persons," "interviews," "field trips," "audio-visual materials," "simulated work experiences," and "hands-on experiences" in what one teacher termed "an attempt to relieve the boredom of doing the same old thing all the time." The emphasis on a creative and active classroom serves as a positive catalyst for the students and radiates throughout the school. Some teachers suggested, however, that if certain students were not caught up in the momentum of a functional Career Education program, they would use personal conferences "using counselor means rather than demanding the student comply." One said, "I tried to overcome this lack of interest by having the kids talk to their own parents or someone who was interested in them." Much the same approach was practiced or suggested in regard to the problem area of community interest.

The seventh problem, community interest, was attacked by letting the enthusiasm at school permeate the home and gradually, but finally, the whole community. However, several teachers saw the slow pace of this approach and accelerated the process by providing inservice training for parents, by starting "a correspondence with parents via a letter and personal visitation program," by "encouraging more educational television in order to educate the community," and by integrating the local citizens into the program as resource persons, contacts for possible field trips, and team workers. The key seemed to be what one teacher called "communication among the business, school, and parents population." Of course, some awareness of the innate resistance to change must be present in any such effort.

The problem area of a natural resistance to change seemed to be bypassed by the teachers. They made no direct reference to this problem except to suggest that "experts should serve as consultants" in the creation of any Career Education program and that the "local Career Education coordinators should spend more time working with the schools." The implication of these suggestions seemed to be that knowledgeable and experienced persons can better serve as implementors of Career Education or as change agents.

For the ninth problem integration of Career Education into the classroom curriculum, most of the teachers "attempted to correlate subject areas with Career Education." This process involved "selecting those units which . . . provided the most relevant information for students to include in course curriculum" and "searching for classroom opportunities that tie into units." In other words, the majority of respondents to this problem opted for the "fusion of Career Education into the regular classes . . . rather than being taught as a separate unit." Some of the more liberal or radical teachers, however, went so far as to suggest that teachers integrate Career Education by "forgetting about the academic areas and realizing that what we are doing is perhaps more important." And, some of the more conservative ones wanted to "still teach reading, writing, recordkeeping, and accounting as well as arithmetic" and "integrate Career Education into the curriculum as a course like music, physical education, and art."

Nobody spoke directly to the problem of resource people, but their solutions seemed to lie in the answers given above. Teachers must plan and work hard to find and solicit resource persons and they must encourage community cooperation in order to enhance the availability of this resource.

Several teachers listed unsolved problems, and these were mainly the age old problems for educators: no money, no time, no cooperation, and no interest. Many teachers also detailed miscellaneous suggestions which reflect the stereotyped nature of the unsolved problem in that they simply suggested more money, more time, and more community and parent support; however, one teacher's suggestion was the ultimate: "to overcome my problems, I simply ignore them. I am a pragmatist!"

In question four, the respondents were asked their opinions of the impact of the Regional Career Education program in their system and in the total region. They were to check much positive impact, some positive impact, no impact, some negative impact, or much negative impact in each of the two cases. Then, they were asked to account for this reaction by detailing how, who, and where the impact manifests itself and improves or harms. The narrative which follows outlines the responses to these two questions, i.e., the responses will be classed positive or negative and these classes will be broken down into groups. The reason behind this process was the overwhelming quantity of positive answers. Only seven people gave other than positive responses and nobody gave a much negative response. Of the positive responses, two-thirds of them were much positive impact, with the other one-third being some positive impact. These positive responses can be broken down in three groups (from most to least frequently mentioned):

1. Career Education is a realistic approach
2. Career Education helps to unify the schools
3. Career Education strengthens the curriculum

The first group of responses emphasizes the realistic nature of Career Education. They see Career Education finding the pulse of existence and from this discovery teaching other persons how to live. This idea of Career Education as life preparation closely allies itself with a cliched term called relevancy, which has been a catchword for educators for so long that the word seems to have no meaning; however, its use in connection with Career Education forces the word to be meaningful. As the narratives above show, the emphasis of Career Education was on hands-on experiences and on on-site visits and projects – in other words, on the tangible and the concrete.

The respondents seemed to feel that Career Education was indeed relevant because Career Education prepared people for life. As one teacher says, "The realization came that unless we are doing Career Education we are not preparing students for life. All students must realize (and some do, now) that they can all be productive members of society. School is made more realistic, more relevant. The community sees the school practicing 'common sense' goals, teaching students what life is really about – work! Students see themselves in a more mature way – as potential working members (productive members) of the community." With this idea that Career Education prepares people for life, a career educator sees education acquiring meaning: "The Career Education program has placed emphasis on preparing students for their future careers and has brought meaning into the educational process. The students are beginning to see the dignity of work . . . I feel that Career Education has improved the quality of school instruction and that the future citizens will be better ones as a result of this program." However, any consideration of Career Education and of realism, relevancy, and meaning must exist on more than just the level of rhetoric. Several of the teachers who spoke in support of the realistic nature of Career Education took the time to show how Career Education was realistic.

Career Education appeared to the teachers to be realistic, because it informed the student about the "real" world, about the world in which the student will live and work, and not a world about which he simply reads. As one teacher said, "student's ideas became more realistic and more informed on possible vocations and professions." This equation between realism and job information was echoed by another teacher who indicated that "Career Education has pointed out to the students that there are some job requirements to be met in obtaining a job." The logical extension of these comments seemed to be that "and these requirements must be known and met — so learn."

Before Career Education, much education outside of the vocational school may well have been missing the mark, because education was not making people aware. As one teacher says, "our Career Education program magnified the shortcomings of our educational system in terms of providing our young people with information and experiences on career opportunities and helping them find their proper place in our free society," and, another teacher indicated, "Career Education has opened a lot of eyes of students and families to the career possibilities available." The thrust of these comments, then, is on the fact that Career Education works with the realities of this 20th century world and the fact that survival means work and work in a competitive society means testing, which can only be met by preparation. These teachers saw Career Education preparing its students for life by making "more and more students aware of career opportunities."

The next most popular response dealt with the unity which these educators saw as a primary product of Career Education. To them, Career Education removed the school house from its isolated position within the community, removed the walls which separated teacher and student, teacher and teacher, and teacher and administrator. As one educator said, "As our community learned more about Career Education, they voiced their approval more and more. Our students have become more concerned with preparing themselves for a career than trying to stay in school until age 16." With this attitude, the respondents whose answers fell into this group showed how Career Education works for everyone.

Many educators have long expressed fears that the school was rapidly losing its place as the center of the community. Of course many extraneous factors enter into this erosion of the school's position (many which Career Education cannot solve), but these respondents saw Career Education as slowing, if not returning, the pendulum's swing. Because of its necessary base within a community, Career Education forces school-parent interaction as well as tapping the community's resource of businesspersons. As one teacher said, "Career Education has had a tremendous impact on our schools and community. It would have been valuable if it had only brought the parents to school, and it did much more." Such an exchange of values naturally benefits the student who sees his/her activities reinforced at home and at school. The results inherent in such reciprocal relationships can be noted immediately in the comments of one teacher, "Educators have become aware that education needs to educate and to prepare children for a purpose. Students begin at an early age preparing themselves for a future. The parents and citizens of the community have accepted Career Education and back us all the way. Employees and employers are proud to let their occupation be known to the students."

Every school has its ideological conflicts, with one group of teachers, students, and administrators seeing this as necessary to a proper education and another group seeing something else as necessary, and one would certainly expect that an innovation like Career Education would divide a school; however, respondent after respondent described a unity resulting from the Career Education approach. Some of this unit likely grows from the overwhelming responses which the students make to Career Education as was seen in the narrative dealing with the question of rewarding experiences. One teacher related, "the Career Education program is a very exerting program. It has brought our schools and community together. It is implanting in the minds of students, teachers, and parents that there is a purpose for our studies. It is exciting to see students more aware that all types of jobs are important and that whatever job they choose they should want to do their very best. It has also been exciting to see teachers and students becoming creative in fusing career concepts into their academic subjects." The excitement which this teacher sees within and receives from Career Education makes for an active, progressive school. Certainly, the impact of such a program could hardly be measured. Another teacher related, "Career

Education has made much impact upon the staff and students of this school. It has brought much learning and joy to the students and teachers."

One teacher talked of Career Education units, "I feel that through Career Education units, teachers have learned to use sources other than textbooks for some good teaching. It has helped the school and community to become a closer working unit." She further articulated and defined what another teacher saw as the fruit of Career Education: "I think the program has brought the school systems in our region closer together. We have learned to share ideas, share materials, and, most importantly, call on each other for consultative help." With this kind of attitude, staffs can work together and create exciting programs.

Response area three dealt with Career Education as it strengthens the curriculum. As a curriculum improvement, Career Education uses the two strengths detailed above to fuse academic preparation and job preparation in such a way that school becomes not only meaningful to the student, but his or her education becomes fun; as teachers said, "students love it," and "Career Education has created new interests," and "with Career Education, students have an exciting time learning, including once uninterested students." Another teacher said, "I have not encountered one group working in a Career Education unit that looked bored." Of course some of this enthusiasm can be attributed to the use of a "main" approach, but some of the teachers detail an inner viscosity which allows Career Education to adapt itself to any system and to satisfy the needs of any clients. One teacher related, "Career Education has caused the classroom teachers to become more aware of how the subject matter they teach relates to the successes or failures of the students after they leave school." This concern with the student and his/her future should cause the teacher to fuse Career Education with the academic curriculum and constantly adapt the class's offerings to the students. One teacher saw this ability as the epitome of Career Education: "Career Education has offered a means to our school system for curriculum evaluation, and in some instances, revision. We have now integrated subject matter and Career Education concepts into our total curriculum because we feel it is an essential and expected part of our total program."

These positive responses outline the fortitude of Career Education and suggest the reception Career Education received in the project area; however, some questions also surfaced from among these positive comments: one teacher wanted to know how Career Education works in the senior high school; another says Career Education will die after project funds leave; and another stresses the need for community involvement. These kinds of comments and the ones found in the "Some Negative Impact" area – five of the seven say no impact because of weak teacher preparation – suggest that work still needs to be done and help and direction still need to be given. However, overall, the teachers were of the opinion that the program has been of "much positive impact."

CHAPTER 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Presented in this chapter is a discussion of the research findings, in summary form, and a presentation of the conclusions reached. Also included are lists of recommendations regarding further research and suggested actions for administrators of Career Education programs. The summaries, conclusions, and recommendations relative to the Student Component are presented first, then the Professional Staff Component is considered.

Student Component

The Student Component of the research effort was designed to assess the effects of Career Education on selected student variables. Several instruments were used to collect data on academic achievement, career maturity, attitude, and motivation. Sample groups of fourth, sixth, eighth, and eleventh grade students were involved. For some comparisons, test scores for Non-Career Education students in the 1974 research study were used.

Academic Achievement

The CTBS was used to measure academic achievement levels of fourth, eighth and eleventh grade students. The analysis of variance was utilized to test for significant differences between Career Education and Non-Career Education groups and between males and females. The technique was also utilized to test for interaction effects between the two main effect variables.

Summary. There was no interaction of the main effects (Sex and Group) on CTBS scores for fourth and eighth grade students. There was one significant F-value computed for eleventh grade students. Career Education males scored significantly lower than the other three groups on Spelling. Because of the almost total lack of interaction, most attention was focused on the tests of main effects.

For the fourth graders, significant differences were identified on five of the eleven achievement score comparisons when sex was used as the main effect. In all cases – Reading Comprehension, Spelling, Math Computations, Total Achievement, and Use of References – females had the significantly higher scores. A similar, but weaker, pattern emerged for eighth graders. Females outscored males on two comparisons – Language Mechanics and

Spelling. For eleventh graders, significant differences were found on three subtests. Females had significantly higher scores on Language Mechanics and Spelling. Males had higher scores on Math Applications.

Where Group was introduced as the main effect, several significant differences were identified for fourth and eighth grade students. Significant differences were apparent on five of the eleven subtests for fourth grade students – Vocabulary, Comprehension, Computations, Total, and Graphics. In all cases, the Career Education group had the higher means. On eighth grade comparisons, Career Education students outscored Non-Career Education students on Comprehension and Use of References. When eleventh graders were compared, no significant differences were found.

Conclusions. Some sub-hypotheses related to potential differences between various student groups were tested. The null hypothesis predicting no difference between males and females was rejected on five achievement test subscores for fourth graders. Females demonstrated significantly higher achievement levels. Likewise, the hypothesis was rejected on two achievement scores for eighth grade students. Again, females had higher achievement levels. With respect to eleventh grade results, the hypothesis was rejected on three subscores. Females achieved significantly higher test scores in two instances and males in the third. Overall, females tended to demonstrate higher achievement scores on a fairly consistent basis. In only a few cases did males have higher scores, and only one instance was found where the difference was significant in favor of males.

Sub-hypotheses were also tested relative to group differences (Career Education versus Non-Career Education). The null hypothesis predicting no significant difference between the groups on achievement scores was rejected on five subtests for fourth graders and two subtests for eighth graders. In all cases, the Career Education students had the higher scores. No significant differences were found for eleventh graders; therefore, the null hypothesis was not rejected. Overall, Career Education students tended to demonstrate higher achievement scores. Only in a few cases (mostly in the eleventh grade) did Non-Career Education students consistently score higher. The scores were not significantly higher.

In general, it appeared that females have higher achievement levels than males, particularly at the elementary and junior high school levels. The differences at the high school level were mixed. This finding was supported by other research which showed that females typically out-perform males in the earlier school years, but males begin to "catch up" in high school and college.

It also appeared that Career Education students out-perform Non-Career Education students at the lower levels. Perhaps the lack of differences at the high school level can be attributed to the fact that the pattern of academic achievement for the students in this study had been fairly well established prior to the high school years. Also, the program had concentrated on the lower grade levels. Career Education operated differently in high school than in the lower grades. It was more difficult to integrate Career Education in high school classes on a coordinated basis since not all students follow the same curriculum as they do in the lower grades. Thus, it may be more difficult to detect differences in achievement at the high school level. Therefore, differences in academic achievement at the lower grade levels may really be a reflection of the effect of different curriculum approaches. Such differences in curriculum approaches may not effect high school students to the same degree.

Recommendations. First of all, as with most any educational research, the need for further study was apparent. Continued study of achievement levels of student groups is needed to verify the results of this research. Special attention also needs to be focused on the high school programs in order to determine if Career Education can, indeed, lead to significant achievement gains. And, research should be undertaken to determine if certain types of students benefit more from Career Education.

Based on the conclusions reached in this study, it was recommended that Career Education programs be implemented in all the schools in Region XII. The achievement patterns of fourth and eighth grade Career Education students were generally better than their Non-Career Education counterparts. The experience gained in the three years the Career Education program has operated can be easily shared with those in schools which have not yet implemented Career Education.

More specifically, the following recommendations are offered:

1. Based on the results of this and the 1974 study, Career Education should be implemented throughout Region XII.
2. Based on the experiences of the past three years, guidelines for the implementation of Career Education should be developed and disseminated throughout the Region.
3. Because of the need for determining the long-term effects of Career Education on students, research on student achievement should be continued. Periodic assessments of achievement levels of the students in this study should be undertaken as the students advance through the remainder of their educational programs. Comparisons between Career Education and Non-Career Education students should be made periodically.

4. Because the ultimate test of the effect of Career Education should show up when students enter the world of work, some provisions should be made to follow-up graduates to determine whether differences in employment levels, success, job satisfaction, job stability, etc., can be identified between Career Education graduates and others.

Attitudes

The KSAI was utilized to test student attitudes toward self, classmates, reading, school, math, and citizenship. Fourth graders completed only the first five subtests; eighth and eleventh graders completed all six parts of the KSAI. The analysis of variance technique was used to test several sub-hypotheses concerning possible differences among student groups.

Summary. When tests for interaction were made, no significant interaction was detected for fourth, eighth, and eleventh grade students. The main effects were then introduced separately.

When Sex was used as a main effect, no significant differences were identified for fourth graders. Two significant F-values were computed for eighth graders with females demonstrating the higher (more positive) attitude scores in both cases (Attitude Toward Classmates and Reading). Two significant sex differences appeared in the results for eleventh graders. Females demonstrated significantly higher scores on Attitude Toward Self and Attitude Toward Reading.

When Group was used as a main effect, one significant difference was noted between the two fourth-grade groups. Non-Career Education students demonstrated a significantly higher score on the scale, Attitude Toward School. None of the comparisons for eighth or eleventh graders revealed any differences.

Conclusions. The null hypothesis that there would be no difference between males and females was rejected on two attitude scales for eighth graders and on two scales for eleventh graders. The hypothesis was not rejected on any of the fourth grade comparisons or the remaining eighth and eleventh grade comparisons.

Females apparently have more positive attitudes toward selected referents than did males. However, even though females fairly consistently outscored males (except in the fourth grade), most differences were slight. Overall, females seemed to hold a slight edge in terms of attitudes.

The null hypothesis which predicted that there would be no differences between Career Education and Non-Career Education students was rejected in only one case. Fourth grade Non-Career Education students scored higher than Career Education students on

Attitude Toward School. On none of the other comparisons (fourth, eighth, and eleventh grade) were there significant differences. In most cases differences were slight as evidenced by low F-values.

Recommendations. Not many differences in attitudes were detected and most of these related to sex differences rather than program differences. It was recommended, again, that research be continued so that long-term effects might be assessed. Furthermore, research using another attitude scale, or measuring attitudes toward other referents, should be conducted. Specific recommendations were:

1. Based on the results of this research, further study needs to be done in the area of attitudinal change. Different instruments and referents should be adapted or developed. Longitudinal data should be gathered to detect possible differences in later years.
2. Even though Career Education students were not generally significantly different from Non-Career Education students in attitudinal areas, it is perhaps too early to make definitive statements about the potential of Career Education for affecting attitudinal changes in a positive direction. Some thought should be given to incorporating affective learning units in the Career Education curriculum and measuring the results against the use of such units in a traditional program. Perhaps attitudinal levels are satisfactory as is, or can be positively changed through conscious effort. Only research can give the answer.

Career Maturity

The career maturity levels of sixth, eighth, and eleventh grade students were measured with the CMI. Again, the analysis of variance technique was used to test several null hypotheses.

Summary. The CMI has two sections – a Competence test which contains five subtests an Attitude Scale which generates a single score. Thus, six separate scores were reported.

First a Sex by Group comparison was made to test for interaction. No significant interaction was detected on any variables for sixth and eighth graders. Interaction was detected on the Attitude Scale for eleventh graders, but not on any of the other variables. On the Attitude Scale, Non-Career Education males had the low score, which was significantly different from the highest score (that for Non-Career Education females).

When Sex was used as a main effect, all six measures produced significant F-values for sixth graders. On all six comparisons, females demonstrated the higher career maturity levels. On four of the six comparisons for eighth graders, significant differences were detected. Again, females outscored males on all six scales. When the eleventh grade results were analyzed, again it was shown that females had higher career maturity scores. However, only one difference was significant.

In general, females seem to demonstrate consistently higher career maturity levels. On 11 of 18 comparisons, they scored significantly higher than males.

When Group was introduced as the main effect, some differences were noted among sixth and eighth graders. For sixth graders, four of the six CMI comparisons led to significant F-values. In all cases, Career Education students demonstrated the higher career maturity levels. They also had higher (non-significant) scores on the other two scales. Eighth grade Career Education students also demonstrated higher career maturity levels on all six measures. The differences were significant in three cases. When eleventh grade student groups were compared, no significant differences were detected.

In general, Career Education students at the sixth and eighth grade levels demonstrated higher levels of career maturity. They consistently outscored Non-Career Education students, even when differences were not significant.

Conclusions. The null hypothesis that there would be no difference between males and females on measures of career maturity was rejected on all six comparisons for sixth grade students. Females had higher career maturity levels. The hypothesis was rejected on four of the six comparisons for eighth graders. Eighth grade females demonstrated higher career maturity levels. The hypothesis was rejected on one comparison for eleventh graders. Females scored significantly higher on the Self-Appraisal scale.

Overall, it is concluded that females have significantly higher career maturity levels than males, especially at the sixth and eighth grade levels. Females consistently outscore males, even where differences were non-significant.

The null hypothesis that predicted no difference between sixth grade Career Education and Non-Career Education students on measures of career maturity was rejected on four of the six CMI scores. Career Education students demonstrated the higher scores in every case. The hypothesis was also rejected on three CMI comparisons for eighth graders. Again, Career Education students had the higher career maturity levels. The hypothesis was not rejected on any of the eleventh grade comparisons.

Overall, it was concluded that Career Education students at the sixth and eighth grade levels have higher levels of career maturity than their Non-Career Education counterparts. There was no difference between the two groups at the eleventh grade level.

Recommendations. It seemed that the Career Education approach was successful at the lower levels in helping students achieve higher levels of career maturity. Thus, the further development and expansion of Career Education programs was supported by these findings. Since career maturity was thought to be important for effective career decision making, the future holds the key to whether those with higher career maturity levels make better career choices than others. Specific recommendations were:

1. Because the Career Education students at the lower (sixth and eighth grade) levels had significantly higher career maturity levels, follow-up research should be undertaken to determine if Career Education students ultimately make better career decisions, more stable career decisions, or career decisions which are different from Non-Career Education students.
2. Because of the lack of difference at the eleventh grade level, more research is needed to determine if career maturity components are really a part of the high school Career Education approach, and, if so, it should be determined whether such concepts make the same impact as they apparently do at the lower levels.
3. Because of the differences noted at the sixth and eighth grade levels, Career Education teachers should be encouraged to continue to work with the Career Education units, paying special attention to male students. Although it may be impossible to close the gap between the sexes with regard to career maturity, the results demonstrate that males have significantly lower career maturity levels and may need more attention or different learning activities.
4. Since students at the lower grade levels, who have participated in the Career Education program, display higher levels of career maturity, longitudinal research should be undertaken to ascertain whether these higher levels stay with them into high school.

Motivation

The JIM Scale was used to assess the motivation levels of eighth and eleventh grade students. The analysis of variance technique was utilized to test for interaction between the classification variables. Then the main effects were analyzed.

Summary. The test for interaction on the JIM Scale scores for eighth graders showed that there was a significant interaction effect. Career Education females had an extremely high motivation score. The scores of the other three groups were similar.

When the main effects were introduced separately, it was determined that females outscored males to a significant degree. However, since interaction had been previously detected, the influence of Career Education females probably contributed most to the difference. When Group was used as the main effect, no difference was noted. The same type of analysis was made with eleventh grade scores. The test for interaction of Sex and

Group showed no significant difference. When Sex was introduced as the main effect, again no significant difference was detected. Also, when Group was used as the classification variable, no significant difference was noted.

Conclusions. Because of the presence of interaction between Sex and Group for the eighth graders, care must be taken in drawing conclusions about the effects of the two variables. Apparently, there was something about the combination of being female and in a Career Education program which produced higher motivation levels than did other combinations. Thus, the hypothesis that there was no interaction between Sex and Group must be rejected for eighth graders. Female Career Education students had significantly higher motivation scores than did any of the other three groups.

Because of the interaction effect, no conclusion really could be safely drawn with respect to the differences noted when Sex was introduced as a main effect. The influence of the female Career Education students probably contributed much to the difference. Likewise, no conclusion could be drawn relative to the effect of the Career Education program, even though the difference noted was not significant.

For eleventh graders, the null hypotheses related to interaction and main effects were not rejected. Apparently, no differences in motivation levels existed at this grade level.

Recommendations. Even though the results of the motivation level analysis were a bit mixed, they did seem positive. For example, it appeared that Career Education could be supported because of its apparent positive effect on females. More specifically, the following recommendations were offered:

1. Because of the effect of Career Education on the motivation of females at the eighth grade level, Career Education should be continued. This seemed to be a positive outcome, since the future career possibilities for females are continuing to expand.
2. In order to determine why the interaction effect showed up, research should be undertaken to determine why the combination of being female and in a Career Education program led to higher motivation levels. A corollary to the study should seek to determine why the combination of being male and in a Career Education program failed to produce motivation levels which were comparable to those of females.
3. In order to determine what effect higher motivation may have on these females, follow-up research is needed. This research should seek to determine if the higher motivation levels lead to higher achievement throughout the remainder of school and into the world of work.

Professional Staff Component

The Professional Staff Component was designed to assess teacher perception of the effectiveness of various people, programs, and activities in increasing the knowledge level of staff members concerning Career Education; to identify factors and personnel development techniques which were effective; to identify problems encountered in implementing Career Education; and to assess teacher opinion of the impact of the Career Education program.

Two hundred two teachers who were identified as having participated in the Career Education program were contacted by questionnaire and/or personal interview. Of that number, 152 teachers (75 percent) responded.

The questionnaire consisted of two parts. The first was a "closed" set of questions dealing with teacher ratings and rankings of successful practices and problems encountered. The second part focused on "open-end" questions, including: rewarding experiences, problems encountered, techniques used to overcome problems, and teacher perception of the impact of the Career Education program.

Tabulated Responses

The "closed" type questions were cross tabulated and analyzed for sex, age, and level taught. Teacher responses were presented by rank order.

Summary. When asked who was most effective in increasing their knowledge and understanding of Career Education, the unanimous response was the Hazard Region Career Education Staff. Second was their System Career Education Coordinator, followed by other teachers from their own system. The first two responses were identical in the 1974 study. However, in 1976, the respondents placed more value on teachers from their own system than on teachers from other schools.

The teachers also felt that the Hazard staff and their system coordinator were the most influential in increasing their positive attitude toward Career Education. It appeared, as in 1974, that a project such as was undertaken in the Hazard Region, would benefit from a strong central staff to provide assistance and direction to teachers in the field. Although still not rated as effective as personnel close to the project, it was interesting to note that State Department of Education Personnel had moved up in their perceived effectiveness between 1974 and 1976.

Concerning which activities were the most effective in increasing their knowledge and understanding of Career Education, summer workshops and regional Career Education conferences again ranked first and second respectively. Inservice programs in their own schools was third. University courses and reading professional literature were perceived as least effective. If the universities were, in fact, active in Career Education, their low ranking would quite possibly change. At the present time, teachers in the field don't perceive university commitment as being too great.

Further, the teachers rated a list of activities concerning which were the most effective in conveying Career Education concepts to their students. Teaching Career Education units was rated as the most effective, followed by utilizing Career Education related examples or methods to supplement regular materials. Career Education units were rated first in 1974 also; however, utilizing Career Education related examples moved from fifth place (last) to second place. The teachers were much more comfortable with this method in 1976 than they were in 1974. According to Career Education advocates, this integration was also considered the most desirable method. It was also interesting to note that field trips were rated last. In 1974, field trips were second only to teaching Career Education units. Analysis of open-end responses lends insight into this shift. A consistent reference was made to the problems associated with field trips and use of outside resource persons, including: time, money, places to visit, organizing, and community cooperation. Elementary teachers, however, still rated field trips high (first).

In obtaining the use of resource persons, teachers were in agreement. Personal contact by teacher was the most effective, followed by telephone contact by teacher. These methods were followed by personal contact by student. Arrangement by an administrator was considered the least appropriate. Student contact, unless personal, also received low ratings.

As a group, teachers felt that the best method of motivating students in Career Education was through hands-on class projects. Surprisingly, field trips was rated as the second highest motivator, even though teachers had previously indicated the problems inherent with this method. Teacher enthusiasm also rated high.

An important question to be answered by this research was, "What factors contribute to program success?" The teachers, as was the case in 1974, were in agreement that the single most important factor was inservice education prior to program implementation. This was followed by leadership from a source such as the Hazard Region Career Education Staff. Administrative support rated next, followed by parental and community support. Receiving the lowest priority were special facilities and prepared instructional materials. These findings were not unanticipated and were, with one exception, identical to the 1974 findings. In 1974, administrative support received an overall ranking of second, rather than leadership from a source like the Hazard staff. Again, teachers felt the need to know enough about the program to be secure in their teaching, and saw the need for a coordinating force behind the total effort.

In connection with the above finding, the teachers also felt the Regional Career Education Staff to be the most knowledgeable of Career Education. They were provided a list of 11 publics and the Hazard staff ranked a high first. Hazard Region teachers who had participated in Career Education workshops ranked second. An interesting finding presented itself in 1976. Counselors from the respondent's own school moved up to third place from seventh and the respondent's building principal moved down from fourth to sixth. After two additional years in operation (from 1974 to 1976), the teachers rated their own teaching colleagues higher. Apparently, when Career Education was new to them, they considered someone else from the outside as knowing more. The shift in regard to counselors was considered quite significant, in that it was this writer's opinion that counselors needed to take a more active, leadership role – particularly when a low level or no funding is available to support Career Education activities.

Teachers were then asked to rate the same 11 publics in regard to the degree to which each held a positive attitude toward Career Education. The Hazard staff again ranked first, followed by the respondent himself/herself and workshop participants (in many cases, the same individuals). Counselors were again rated high. Fourth were counselors from the respondent's school and fifth were counselors as a total group. Again, this was a significant change from 1974, when counselors were rated lower in their knowledge and attitude toward Career Education. Building principals were again rated lower.

Identification of problems teachers encountered in implementing Career Education was a major consideration in this study. The most consistently mentioned problem was lack of sufficient funds to purchase materials. This was the number one problem in 1974 also. Other high priority problems included: insufficient time to plan individually and with other teachers, insufficient funds for field trips, the availability of appropriate Career Education materials for students, and not finding other teachers willing to participate in Career Education. Areas in which teachers reported little difficulty included: being able to interest students in Career Education, feeling competent when teaching, evaluating student growth in Career Education, integrating Career Education into the existing curriculum, availability of sufficient inservice training, and achieving both Career Education and academic objectives. Other teachers not accepting Career Education and negative opinions of others dropped in rank from 1974 to 1976. Sufficient inservice training also dropped in rank as a problem, from 13th to 22nd. Organizing field trips apparently was perceived as somewhat more of a problem, raising from 16th to 10th.

Insufficient individual planning time and not having sufficient Career Education teacher materials or inservice training appeared to present more problems for the older teachers. They saw the need for special facilities as less of a problem than did the younger teachers. And, the elementary teachers ranked acceptance of Career Education by other teachers and availability of school time for speakers and field trips as less problems than did the secondary teachers. This was considered a natural outcome; since the elementary teachers are in a much better position to dictate their daily activities, and don't have to rely on the cooperation of other teachers to the same degree as secondary teachers teaching in a departmentalized structure. Secondary teachers appeared to have more problems in finding resource persons, organizing field trips, and evaluating student growth in Career Education.

Further considering field trips and resource persons, the teachers were asked how many of each they utilized. The average number of field trips was 2.62 and the average number of resource persons utilized was 3.28. Females made slightly more field trips, but used fewer resource persons than did males. Secondary teachers also utilized more field trips and fewer resource persons than did elementary teachers.

Overall, 75 percent of the teachers indicated that they had involved parents in the Career Education program. Females involved slightly more parents than did males. Considering level taught, more elementary teachers involved parents (94 percent). Only 63 percent of the high school teachers responded that they had involved parents.

When asked their opinion of what would happen to Career Education when project funding stopped and a Regional Career Education Staff was no longer available, a total of 78.7 percent indicated that Career Education would continue at some level. Most of this group felt that the level would be reduced and others felt it would be continued by only a few teachers. Only 4.6 percent thought it would continue strongly and 2.6 percent felt it would stop altogether.

Teachers were further asked their opinion of the impact which Career Education had made in their school and in the total Hazard Region. The ratings ranged from one (1) indicating "No Impact," to five (5) indicating "Much Positive Impact." Consistently high ratings were given regarding the impact of the program. The overall rating of the impact in the respondent's school was 4.39; the corresponding rating for impact in the region was 4.48. These ratings were considered to indicate a positive teacher attitude toward Career Education as well as strong feeling on the part of teachers that the program had been quite beneficial for students in their school and for the total region.

Conclusions and Recommendations. Based on analysis of the data collected for the Professional Staff Component of this study, the overall recommendation would be the continuation and expansion of Career Education programs. The questionnaire items and the open-end questions dealing with rewards and impact were consistent in presenting teacher opinions which were favorable of Career Education. Even the problems encountered section of the questionnaire rang with support, for the problems encountered were not problems associated with the value of the program; they were problems which kept the teachers from doing as much as they would have liked to do.

The following specific recommendations, therefore, dealt with the positive aspect of continuation and some teacher opinions of how that might be more effectively accomplished. Included were:

1. The Hazard Career Education Staff and their system coordinator for Career Education were considered to be the most influential in developing their knowledge and attitude toward Career Education. Therefore, implementation of Career Education programs on a regional or system basis should be preceded by an organizational structure to lend direction and support to the program.

2. Workshops, regional conferences, and inservice programs in the teacher's own school were perceived as being the most effective approaches in increasing the teacher's knowledge, understanding, and commitment toward Career Education. Therefore, such activities should be given the greatest consideration as activities prior to and during implementation.

3. University courses were perceived as least effective in increasing teacher knowledge and understanding of Career Education. University faculties should be made aware of this finding and evaluate the position they wish to take in regard to the development and expansion of Career Education.

4. The teachers rated teaching Career Education units as the most effective means of conveying Career Education concepts to students, followed by utilizing Career Education related examples or methods to supplement regular curriculum materials. Therefore, it would be advisable to initiate a Career Education program utilizing the teaching of Career Education units and move to the full integration of Career Education into the curriculum as a means of perpetuating the concept.

5. Between 1974 and 1976, teacher perception of the value of field trips and resource persons fell. These activities, which have been encouraged as sound Career Education methods, should be further investigated – in terms of usefulness and the problems which prevent them from succeeding (time, money, places and/or people to visit, arrangements, and community cooperation, etc.).

6. Elementary teachers differed from secondary teachers, ranking field trips as the most effective means of conveying Career Education concepts. However, it was interesting to note that, as a group, elementary teachers took their students on fewer field trips than did secondary teachers. If field trips are to remain a favored activity of career educators, the whole area of the community as a resource will require more organization.

7. Teachers were in agreement that inservice education prior to implementation of Career Education was the single most important contributor to program success. This was followed by leadership from a source such as the Hazard Region Career Education Staff. This conclusion pointed to the need for organizing inservice activities prior to implementation and lends further support to Number 1. above, the need for an organizational structure to provide support and direction to the effort.

8. The need for preservice teacher education input may also be interpreted based on the above perceived need for inservice prior to implementation and the previously mentioned lack of teacher opinion of the value of university courses in preparing them to work in Career Education. Therefore, it would be recommended that, if Career Education is to survive, inservice programs should be the rather expensive "stop-gap" measure to provide teachers with sufficient knowledge to feel comfortable teaching through this concept, but teacher education involvement be seen as the method of perpetuating and further developing the concept.

9. Counselors were viewed with considerably more favor in 1976 than they were in 1974. This might be taken to indicate a significant shift in teacher opinion of counselors. Therefore, the role of the counselor in a Career Education program should be examined. It is this writer's opinion that counselors should take a more active role, particularly since, in a Career Education program, the curriculum becomes the real tool for vocational or career guidance. The counselor's role might well include working much more in the area of a resource person for the teacher and conducting many more group guidance activities.

10. The two most consistently mentioned problems centered around funds and time. These two areas should be closely monitored by administrators, Career Education coordinators, and State Department of Education personnel responsible for Career Education. If teachers are to articulate their activities, they need time to plan individually and with other teachers. They also need access to limited funds for materials and field trips. However, the possibility that these two areas were cited as problems because of poor administrative planning and curriculum articulation should also be investigated.

11. Teachers rated the impact of the Career Education program as being substantial. The overall rating of impact in the respondent's school was 4.39

on a five (5) point scale and the rating of impact in the total region was 4.48. It was concluded that these ratings indicated a positive teacher attitude toward Career Education as well as a strong feeling that the Career Education program had been beneficial to their community and students. Based on this finding, it would follow that Career Education should be supported at the state level and efforts be made to expand the opportunities to students at the local level.

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APPENDIX A

TEACHER QUESTIONNAIRE
HAZARD CAREER EDUCATION PROJECT
(PHASE TWO)

TEACHER QUESTIONNAIRE
HAZARD CAREER EDUCATION PROJECT

NAME_____________________SCHOOL_____________________DISTRICT______________

1. Sex: _____male _____female 2. Age_____ 3. _____years teaching experience

4. _____years in full-time employment outside of education

5. Grade(s) primarily taught: _____K-3 _____4-6 _____7-9 _____10-12

6. Primary Position: _____Teacher _____Counselor _____Administrator _____Other______________
specify

7. Subject primarily taught:____
(Specify subject, e.g., agriculture, math, business & office, social studies, etc.)

SECTION II

DIRECTIONS: Answer the following by rank ordering the responses to each question, one (1) being highest. If you have not done some of the activities, respond according to where you feel the activity would rank. Give each blank a number from 1 to n.

EXAMPLE: Rank order the following activities in terms of which was the most to least interesting to your students.

_____ Lectures
_____ Field trips
_____ Class projects
_____ Other____
(Please specify)

8. Rank order the following in terms of who was the most to least effective in increasing your knowledge and understanding of Career Education.

_____ Other teachers in your system
_____ State Department personnel
_____ Regional office Career Education staff from Hazard
_____ Your system's Career Education coordinator
_____ Teachers from other schools
_____ University faculty
_____ Out-of-state consultants
_____ Other____
(Please specify)

9. Rank order the following activities in terms of which was most to least effective in increasing your knowledge and understanding of Career Education.

_____ In-service programs in your school
_____ Summer workshops
_____ Career Education Conferences (sponsored by the regional staff in Hazard)
_____ University courses
_____ Professional meetings
_____ Reading professional literature
_____ Other____
(Please specify)

10. Rank order the following activities in terms of which you felt was the most to least effective method of conveying Career Education concepts to your students.

_____ Resource people in your class
_____ Teaching Career Education units
_____ Field trips
_____ Class projects
_____ Integrating Career Education concepts with regular academic material.
_____ Other____
(Please specify)

11. Rank order the following in terms of which was the most to least effective method of securing the services of a resource person for your class.

_____ Letters sent by you
_____ Letters sent by students
_____ Telephone contact by you
_____ Telephone contact by students
_____ Personal contact by you
_____ Personal contact by students
_____ Arrangement by your administrator
_____ Other____
(Please specify)

12. Rank the following in terms of their effectiveness in motivating students.

_____ Hands-on class projects
_____ Bulletin boards
_____ Career corners
_____ Doing research and written reports on occupations
_____ Resource persons
_____ Field trips
_____ Group work
_____ Films and filmstrips
_____ Role playing
_____ Teacher enthusiasm for Career Education
_____ Other ____
(Please specify)

13. Rank the following in terms of which you feel is the most to least important determiner of program success in Career Education.

_____ In-service education for teachers prior to implementation
_____ Availability of already prepared instructional materials
_____ Administrative support
_____ Special facilities
_____ Parental and community support
_____ Continued leadership from a source such as the regional Career Education staff from Hazard
_____ Other ____
(Please specify)

SECTION III

14. Have you involved parents in your Career Education program?

_____ yes If yes, how? ____
_____ no ____

15. _____ How many field trips did your class(es) take this past year? (1974-75)
(Number)

16. _____ How many resource persons visited your class? (1974-75)
(Number)

17. On a scale of 1 to 5, 1 being highest and 5 being lowest, rate the extent to which each of the following (in your opinion) is knowledgeable of Career Education. (circle one)

	HI Knowledge			LO Knowledge	
Parents	1	2	3	4	5
Community at large	1	2	3	4	5
Teachers (as a total group)	1	2	3	4	5
Administrators (as a total group)	1	2	3	4	5
Counselors (as a total group)	1	2	3	4	5
Participants in the summer workshop	1	2	3	4	5
Regional Career Education staff from Hazard	1	2	3	4	5
Teachers in your school	1	2	3	4	5
Your principal	1	2	3	4	5
Your counselor	1	2	3	4	5
You	1	2	3	4	5

18. On a scale of 1 to 5, 1 being highest and 5 being lowest, rate how favorable an attitude you feel each of the following has toward Career Education. (circle one)

	HI Attitude			LO Attitude	
Parents	1	2	3	4	5
Community at large	1	2	3	4	5
Teachers (as a total group)	1	2	3	4	5
Administrators (as a total group)	1	2	3	4	5
Counselors (as a total group)	1	2	3	4	5
Participants in the summer workshop	1	2	3	4	5
Regional Career Education staff from Hazard	1	2	3	4	5
Teachers in your school	1	2	3	4	5
Your principal	1	2	3	4	5
Your counselor	1	2	3	4	5
You	1	2	3	4	5

SECTION IV

19. Please name two (2) of the most significant problems you encountered in implementing Career Education.

a.

b.

20. What techniques or procedures did you use to overcome each of the above problems? If not overcome, how might you suggest that each be overcome?

a.

b.

21. The following list represents potential problems to the success of Career Education. Indicate the extent to which it affected your situation. (circle responses)

a.	Obtaining quality resource people	No Problem	Little	Some	Much
b.	Knowledge of places to visit	No Problem	Little	Some	Much
c.	Organizing for a field trip	No Problem	Little	Some	Much
d.	Having sufficient funds to purchase materials	No Problem	Little	Some	Much
e.	Having sufficient funds to take field trips	No Problem	Little	Some	Much
f.	Having sufficient facilities to conduct Career Education activities	No Problem	Little	Some	Much
g.	Availability of appropriate Career Education materials for students	No Problem	Little	Some	Much
h.	Availability of Career Education materials for you	No Problem	Little	Some	Much
i.	Being able to interest your students in Career Education concepts	No Problem	Little	Some	Much
j.	Being able to evaluate your students' growth in Career Education	No Problem	Little	Some	Much
k.	Other teachers accepting the concepts of Career Education	No Problem	Little	Some	Much
l.	Other teachers being willing to move toward Career Education	No Problem	Little	Some	Much
m.	Your ability to integrate Career Education into the existing curriculum	No Problem	Little	Some	Much
n.	Your feeling of confidence when teaching a Career Education unit	No Problem	Little	Some	Much
o.	Availability of sufficient individual planning time	No Problem	Little	Some	Much
p.	Availability of sufficient in-service training programs	No Problem	Little	Some	Much
q.	Availability of school time for speakers and field trips	No Problem	Little	Some	Much
r.	Finding resource people with time to come to school and speak to your students	No Problem	Little	Some	Much
s.	Availability of sufficient time to plan with other teachers	No Problem	Little	Some	Much
t.	Teachers being involved in decisions about Career Education	No Problem	Little	Some	Much
u.	Class size too large to achieve Career Education objectives	No Problem	Little	Some	Much
v.	The extent to which differing student interests and aptitudes affected your program	No Problem	Little	Some	Much
w.	Achieving Career Education objectives and also achieving academic objectives	No Problem	Little	Some	Much
x.	Negative opinions about Career Education by other faculty or administration	No Problem	Little	Some	Much
y.	Arranging for the continuation of Career Education for next year	No Problem	Little	Some	Much
z.	Not completing Career Education objectives because of the need to complete other important school objectives	No Problem	Little	Some	Much

SECTION V

22. What was the most rewarding experience you encountered in working with your students and Career Education?

23. What is your opinion of the impact of the Regional Career Education Program?

a. In your school system

_____ Much positive impact
_____ Much negative impact
_____ Some positive impact
_____ Some negative impact
_____ No impact

b. In the total region?

_____ Much positive impact
_____ Much negative impact
_____ Some positive impact
_____ Some negative impact
_____ No impact

24. Please use the space provided below to describe the impact you feel the Career Education Program has had. (on students, staff, community, etc.)

25. In your opinion, what will happen to Career Education when the project funding ends and the Regional Career Education staff is gone?

a. In your school system

_____ Continue strongly
_____ Stop
_____ Continue at reduced level
_____ Gradually decline and finally disappear
_____ Continue at a low level by a few teachers

b. In the total region

_____ Continue strongly
_____ Stop
_____ Continue at reduced level
_____ Gradually decline and finally disappear
_____ Continue at a low level by a few teachers

THANK YOU for your assistance.

Return to:

Clayton P. Omvig
46 Dickey Hall
University of Kentucky
Lexington, Ky. 40506

APPENDIX B

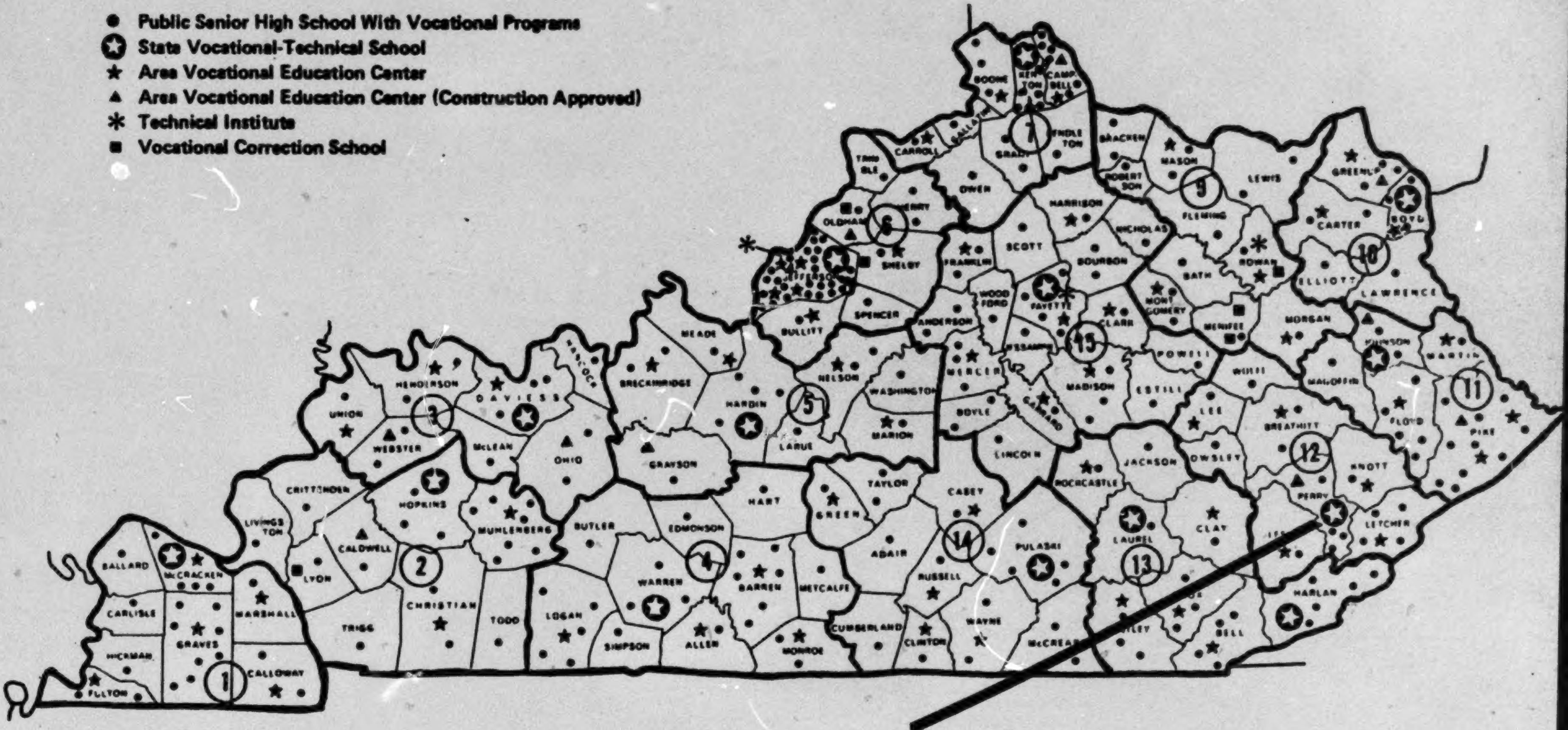
KENTUCKY'S REGIONAL EDUCATION STRUCTURE

CE 009 598

KENTUCKY'S REGIONAL EDUCATION STRUCTURE

CODE: (Facilities Offering Vocational Programs, 1975-76)

- ● Public Senior High School With Vocational Programs
- ✪ State Vocational-Technical School
- ★ Area Vocational Education Center
- ▲ Area Vocational Education Center (Construction Approved)
- ✱ Technical Institute
- ■ Vocational Correction School


BOONE
KENTON
CAMPBELL
GALLATIN
CARROLL
TRIMBLE
GRANT
PENDLETON
BRACKEN
MASON
ROBERTSON
LEWIS
GREENUP
BOYD
OWEN
HENRY
OLDHAM
JEFFERSON
SHELBY
SPENCER
BULLITT
HARRISON
NICHOLAS
FLEMING
ROWAN
CARTER
ELLIOTT
LAWRENCE
SCOTT
FRANKLIN
BOURBON
BATH
WOODFORD
FAYETTE
CLARK
MONTGOMERY
MENIFEE
MORGAN
JOHNSON
MARTIN
ANDERSON
JESSAMINE
POWELL
WOLFE
MAGOFFIN
FLOYD
PIKE
MEADE
HANCOCK
HENDERSON
DAVIESS
BRECKINRIDGE
HARDIN
NELSON
WASHINGTON
MERCER
MADISON
ESTILL
LEE
BREATHITT
UNION
WEBSTER
McLEAN
OHIO
GRAYSON
LARUE
MARION
BOYLE
GARRARD
LINCOLN
JACKSON
OWSLEY
KNOTT
CRITTENDEN
HOPKINS
MUHLENBERG
BUTLER
EDMONSON
HART
GREEN
TAYLOR
CASEY
ROCKCASTLE
CLAY
PERRY
LETCHER
LIVINGSTON
CALDWELL
LYON
CHRISTIAN
TODD
LOGAN
WARREN
SIMPSON
ALLEN
BARREN
METCALFE
MONROE
ADAIR
RUSSELL
CUMBERLAND
CLINTON
WAYNE
PULASKI
McCREARY
LAUREL
WHITLEY
KNOX
BELL
HARLAN
LESLIE
BALLARD
McCRACKEN
CARLISLE
HICKMAN
FULTON
GRAVES
MARSHALL
CALLOWAY
TRIGG
1
2
3
4
5
6
7
9
10
11
12
13
14
15

Hazard, Kentucky (Region XII)